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LOUISVILLE REVIEW.

MAY, 1856.

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Exchanges.

The following Journals have been received:

Cincinnati Medical Observer, for January, February, and March.
Ohio Medical and Surgical Journal, for January and March.
Medical Independent, for March and April.
Monthly Stethoscope and Medical Reporter, for January and February.
Medical News and Library, for January, February, March, and April.
New Jersey Medical Reporter, for January, February, and April.
New York Journal of Medicine, for January and February.
American Medical Monthly, for February, March, and April.
New York Medical Times, for January, February, March, and April.
American Medical Gazette, for January, February, and March.
Buffalo Medical Journal, for January, February, March, and April.
Boston Medical and Surgical Journal, from January 3d, to April 10th, inclusive.
American Journal of the Medical Sciences, for January and April.
Medical Examiner, for January, February, March, and April.
Montreal Monthly Journal of Medicine, for March and April.
Charleston Medical Journal, for January and March.
Southern Medical and Surgical Journal, for January and February.
Atlanta Medical and Surgical Journal, for January and February.
New Orleans Medical and Surgical Journal, for January and March.
Nashville Journal of Medicine and Surgery, for January, Feb'y, March.
Southern Journal of the Med. and Phys. Sciences, for Feb'y and March.
Memphis Medical Recorder, for January, February, and March.
St. Louis Medical and Surgical Journal, for January, Feb'y, and March.
Peninsular Journal of Medicine, for Jan'y, Feb'y, March, and April.
North-Western Medical and Surgical Journal, for Jan'y, Feb'y, March•
Western Lancet, for January, February, and March.
American Journal of Dental Science, for January and April.
Dental News Letter, for January and April.
Dental Register of the West, for January.
American Journal of Pharmacy, for January and March.
American Journal of Science and Arts, for January.
Journal of the Franklin Institute, for February and April.
American Journal of Insanity, for January and April.
British and Foreign Medico-Chirurgical Review, (Am. ed.) for January.
Braithwaite's Retrospect, (American edition,) for January.
Ranking's Half-Yearly Abstract, (American edition,) for January.

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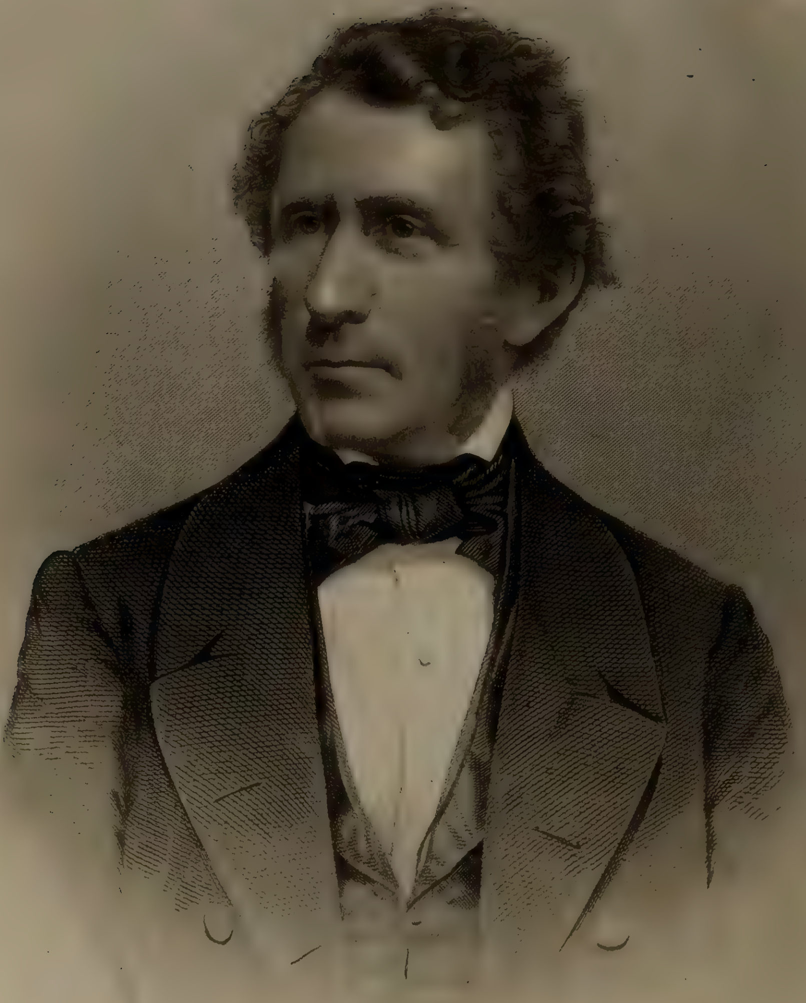

I am, Sir, very respectfully
yours Dan Drake

APPLEGATE & Co PUBLISHERS
CINCINNATI, O.

THE

LOUISVILLE REVIEW.

MAY, 1856.

PART FIRST.

Analytical and Critical Reviews.

Memoirs of the Life and Services of Daniel Drake, M. D. By Edward D. Mansfield, LL. D., &c., *Cincinnati*, 1855.

The subject of these Memoirs was a remarkable man. His life was eventful even beyond that of the majority of men who have risen to equal distinction in professional life. He was one of the early pioneers of medicine in the Valley of the Mississippi, and the most distinguished of the number. Identified for more than half a century with the history of one of our populous and thriving cities, it was his fortune to have been its first student of medicine, the first of its students to take his medical degree, and its first, as he was by far its most voluminous and original, medical author. He was the originator and founder of two Schools of Medicine in Cincinnati, and besides these was successively connected with three other Medical Colleges in other cities. He participated in the first course of medical lectures delivered in the backwoods of America, and his signature was affixed to the first diploma ever conferred by a western medical school, two years after receiving his own degree. The history of the life of such a man is full of interest, and to the young physician cannot but be instructive.

Daniel Drake was born near the town of Plainfield, Essex County, New Jersey, of poor, but industrious, pious parents, on the 20th of October, 1785. His father, Isaac, was the youngest son of Nathaniel Drake and Dorothy Retan. The maiden name of his mother was Elizabeth Shotwell. The mothers of both of his parents died young, and both his grandfathers married again. The marriages, in reference to the children, were unhappy in both instances; and the narratives which he heard in his childhood concerning the conduct of their stepmothers, seems to have made an indelible impression upon his mind. He describes his father as having been " a gentleman by nature, and a Christian from convictions produced by a simple and unaffected study of the word of God." His mother, with even less education than his father, was a discreet, judicious woman, and of her pious example and wise control he speaks with gratitude as having shielded him from the evil influences to which his youth was exposed. Daniel seems to have been all that such parents could desire in a son. He was affectionate, dutiful, and industrious, sharing cheerfully in the honest toils of his father, and helping his mother in her domestic labors. In a series of autobiographical letters which he addressed to his children a few years before his death, he thus alludes to some of the humble occupations of his boyhood:

"Upon this (sheep-shearing) I look back with little satisfaction; it was difficult and tiresome. But to the carding I lent a more cheerful helping hand, and could roll as many good rolls in a given time, as any 'gal' in the neighborhood. Mother, generally, did the spinning, but the doubling and twisting was a work in which I took real pleasure. The buzz of the big wheel running, (as I walked backwards, and turned the rim with increased velocity,) from the lowest to the highest note of the octave, still seems like music in my ears. To this process succeeds the reeling into skeins; and at a future time the winding of a part of these into balls for stockings. In the last operation, I got my first lesson of patience under perplexity. When a tangled skein fell into my hand, fretfulness and impatience were utterly at war with progress. Alas! how long it takes us to become submissive to simple teachings. In the long and checkered life through which I have passed since those days, how many tangled skeins have fallen into my hands, and how often have I forgotten the patience which my dear mother then inculcated upon me! Human life itself is but one long and large tangled skein, and in untwisting one thread, we too often involve some others fatally. Death at last untangles all. To the eye of common observation, the spacious firmament appears not less a tangled than a shining frame; and yet Newton, by patience, as he himself declared, reduced (for the human mind,) the whole to order."

In the spring of 1788, when he was less than three years old, his father removed to Kentucky, and settled in Mason County, near to the present Maysville. When they reached this new home in the wilderness, the father of the family, consisting of a young wife and two children, had but one dollar in his pocket, and that he was asked for a bushel of corn! The following is the description given by Dr. Drake of his first home in Kentucky:

"Fancy to yourself a log-cabin of the size and form of E—'s dining room, one story high without a window, with a door opening to the South, with a half-finished wooden chimney, with a roof on one side only, without any upper or lower floor; and fancy still further, a man and two women stepping from sleeper to sleeper, (poles laid down to support the floor when he should find time to split the puncheons,) with two children, a brother and sister, sitting on the ground between them, as joyous as ever you saw Frank and Nell, and you will have the picture that constitutes my first memory. The mordant which gives permanence to the tints of this domestic scene, was a sharp rebuke from my father, for making a sort of whooping guttural noise, (which is still ringing in my ears,) for the amusement of my sister Lizzy, then about a year old. Thus my first memory includes an act of discipline by my father, and well would it have been for many who have grown up, uncontrolled by parental admonition, if they had been subjected, in due time, to a parental sway as firm and gentle as that which presided over my childhood."

The schools of that new settlement were few and scattered, and the teachers but indifferently qualified for their duties; but even of these slender opportunities Mr. Drake was not able fully to avail himself for the education of his son, for he was not stout of body, and Daniel was the only one to assist him in the work of his farm. "The corn had to be hoed, and seeding time required the wheat-field to be harrowed after the sowers, and seed had to be covered with the hoe near the numerous stumps; and it was indispensable for me to labor with my hands as well as my head. So I had to rise at the dawn of day, and work at the field till breakfast time, then eat, and start with my dinner in my hand. As the distance (to the school-house) was two miles, I had to use feet as well as head and hands, and generally ran most of the way. But what did I do after I reached the consecrated log-cabin? Why work, conning the hard words in Webster's Spelling-book, especially certain *outre* ones, and certain other tables of words alike in sound, but different in signification and spelling, write, cipher, and read in Scott's Lessons."

These few lines, written after Dr. Drake had become old and honored, give us a vivid idea of the boy and of the circumstances of his early life. The extent of his father's library corresponded with the character of his schools. The only books in it that he could remember, were the Bible, Rippon's Collection of Hymns, Dilworth's and Webster's Spelling-books, Entick's Dictionary, Scott's Lessons, Esop's Fables, the Life of Franklin, and a single romance of chivalry, "the famous History of Montellion." But meagre as were his facilities for acquiring knowledge, he affirms, what we can easily believe, that his attainments exceeded those of most of the boys around him.

> "The *caste* to which I belonged," he writes, "was to be changed, and in the arrangements of Providence, I was made unconsciously the instrument by which that change was to be effected. The conception of this change was less my own than my father's. His poverty he regretted, his ignorance he deplored. In consulting the tradition of the family, he found no higher condition than his own, as their lot in past times; but he had formed a conception of something more elevated, and resolved on its attainment—not for himself and mother, nor for *all* his children, for either would have been impossible; but for some member of the family. He would make a beginning; he would set his face towards the land of promise, although, like Moses, he himself should never enter it."

Daniel was early destined to the profession of medicine, and in his sixteenth year left his humble home in Kentucky to enter upon his medical studies in Cincinnati. He reached the house of his good-natured, gifted preceptor, Dr. William Goforth, on the 18th of December, 1800, the first student of medicine that had entered that town. His first assigned duties were to read Quincy's Dispensatory, and grind quicksilver into mercurial ointment;

the latter of which, he says, "from previous practice on a Kentucky hand-mill, he found much the easier of the two." The impression made upon his mind on his entrance upon this new life was deep and lasting. In an address delivered to the Cincinnati Medical Association, in 1852, he says:

> "But few of you have seen the genuine old doctor's shop, or regaled your olfactory nerves in the mingled oders, which, like incense to the god of Physic, rose from brown paper bundles, bottles stopped with worm-eaten corks, and open jars of ointment, not a whit behind those of the apothecary in the days of Solomon. Yet such a place is very well for a student; however idle, he will always be absorbing a little medicine, especially if he sleep beneath the greasy counter!"

Underneath the shade trees which grew where Cincinnati now stands, rather than amid these odors of the shop, it was his allotted task, he relates, "to commit to memory Cheselden on the Bones, and Innes on the Muscles, without specimens of the former or plates of the latter; and afterwards to meander the currents of humoral Pathology of Boerhaave and Van Swieten, without having studied the Chemistry of Chaptal, the Physiology of Haller, or the Materia Medica of Cullen." Chance threw in his way some of the writings of Rush, which he read with avidity. Before he had completed the third year of his pupilage, Dr. Goforth began to ask his opinions on cases which arose in his practice, and at the end of the fourth, yet under nineteen years of age, took him as a partner into business. How he deported himself during these years of absence from the paternal roof, we may judge from the following sentence in a letter full of expressions of filial tenderness to his father: "Since I have lived here, I defy the town to impeach me with one action derogatory to my honor or reputation."

The partnership does not seem to have been a profitable one to the younger member in a pecuniary view, for we find him writing to his father three months after it commenced:

> "I have not had three dollars in money since I came down, but I hope it will be different with me after awhile. An execution against the doctor for the medicine he got three years since, was issued a few days ago, and must be levied and returned before the next General Court, which commences the first of September. This execution has thrown us all topsy-turvy. The doctor has given his accounts (up to

the time our partnership commenced) which amount to eight or nine hundred dollars, to the constable for collection. He has done nothing yet, though he has had them almost two months. I am heartily sick and tired of living in the midst of so much difficulty and embarrassment, and almost wish sometimes I had never engaged in partnership with him; for his medicine is so near gone, that we can scarcely make out to practice, even by buying all we are able to buy."

In another letter to his father he says:—"I have not been able to purchase those two books I was telling you were at a store in town, but may be I shall before I leave this." He practised great self denial and avoided debt, and by the autumn of the following year, found means to attend a course of medical lectures in the University of Pennsylvania. He arrived in Philadelphia November 9th, 1805, and after paying for four tickets, found his resources reduced to the lowest point—a single cent, as he relates, "which he kept as a pocket-piece." The tickets which he took, were those of Rush, Woodhouse, Wistar, and Physick, professors respectively of Physic, Chemistry, Anatomy, and Surgery, the least, he says, that he could get along with, most of the students taking more. We have the means, fortunately, of knowing how the young student passed his time during his attendance upon the first course of lectures. He writes to his father:

> "I learn all I can; I try not to lose a single moment, seeing I have to pay so dear for leave to stay in the city a few months. I go to the different churches every Sunday. The play-house has been open ever since the last of November. I have only been once, and shall go only once more while I stay here. I attend the lectures, and then study till two in the afternoon. After dinner apply myself closely to book; call for candles, and sit up till one, sometimes two, in the morning. This is my constant plan of conduct. I sleep only six hours in the twenty-four, and when awake try never to lose a single moment. I had not money enough to take a ticket at the Hospital Library, and therefore had to borrow books. Several of my fellow students, and Dr. Dewees, and Dr. Barton were very kind to me in this way."

On his return from Philadelphia, his filial devotion induced him to settle for a short time at Mayslick, near his parents; but in the spring of 1807 he fixed his permanent residence in Cincinnati. In the autumn of that year he married Miss Harriet Sisson. Three years afterwards he commenced his career as author. In 1810, he published a large pamphlet on the Topography, Climate and Diseases of Cincinnati, which may be regarded as the germ of the great work which occupied so much of his subsequent life. This was followed, in 1815, by his "Picture of Cincinnati," a volume, considering the circumstances under which it was written, of extraordinary merit. It contains a large amount of scientific information upon subjects which had been but little investigated in our country at the time when Dr. Drake wrote. It abounds in statistics and original observations relating to disease, population, natural history, climate, topography, and antiquities. The time and labor required for its preparation would have been great under the most favorable auspices. It was prepared in the midst of distractions and difficulties greater in proportion, the author thought, than those in which Dr. Johnson composed his dictionary—"obliged to make a dozen applications for a fact which might be answered in as many words, to exchange the inkstand and pen for the lancet and gallipot every hour in the day, and above all, to confront boldly a succession of pertinacious duns." There is something ludicrous in the assertion of his biographer, that this work contains "the substance of all that we know" of the matters about which it treats; no one would have felt the absurdity of such a claim more forcibly than Dr. Drake himself; but its scientific merits, though not recognized by the people of Cincinnati, conferred upon its acute and learned author much reputation in Europe as well as in his own country.

The cares and labors of his profession were not the only hindrances to Dr. Drake's literary pursuits at this time. We have seen that he still labored under pecuniary embarrassments. He had very unwisely embarked in mercantile business which proved disastrous. While diligently collecting the materials for his publications, he was at once druggist, grocer, physician, school-secretary, and politician. It is not to be wondered at that amid so many callings he found the "duns" "pertinacious."

In the fall of 1815, partly with a view to extending his medical acquirements, and partly to buy goods, he visited Philadelphia a second time, and took his degree in the University of Pennsylvania the 11th of May, 1816, the first ever conferred upon a medical student of Cincinnati. Being absent from the city, and failing to receive notice from the Dean, he returned to Philadelphia the day after the annual commencement. Under these circumstances the professors, considering the high literary accomplishments of the candidate, the value of his late publication, his eminence and future promise, examined him and recommended him to the Board of Trustee for the degree, which was granted at a special Commencement.*

His occupations on his return home, were multifarious and perplexing. His mercantile affairs were deranged by the convulsion which caused such general ruin at the close of our last struggle with England. But in the midst of the commercial gloom, his professional prospects continued to brighten. He received an invitation from the Trustees of Transylvania University in January, 1817, to take a chair in the Medical Department which was about to be organized, and thus was diverted, we believe forever, from the uncongenial commercial pursuits which had begun to divide his mind with his profession. We have the means of knowing how cordially he hailed this invitation to a theatre so well suited to all his tastes and aspirations. In a letter to an intimate friend he thus, somewhat ironically, expresses his feelings on the occasion:

> "I am now going to astonish you, so cling hold of every support within your reach—*I am a Professor!* Yes, incredible as it may appear to you and my other intimate friends, I am really and *bona fide* appointed a professor, and repeat it on this side of the sheet to save you the trouble of turning back to see whether your eyes did not deceive you. I am, let me repeat, unquestionably a professor; but you must not suppose by this I am a great man. For a professorship to confer greatness, it must be a professorship in a great institution. But that does not happen to be the case in this instance. In Lexington, Ky., there has been for many years an incorporated seminary, styled the Transylvania University. It has an ample endowment, but very little celebrity. The trustees are, however, engaged in the erection of a large and elegant college edifice, and have established a Faculty of Medicine, as well as a Faculty of the Arts. The professorship of Materia Medica and Botany is the one they have offered to me, and five days ago I signified my acceptance. I am not, however,

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* Letter of Prof. Carson to Prof. Meigs, Trans. Coll. Phys. Phila. 1853.

about to move thither, but calculate to be suffered to spend my winters there, and the rest of the year in this place."

The first experiment of a medical school at Lexington was not successful. The number of students was only twenty, of whom one was graduated *doctor of medicine* in the spring of 1818. On the 23d of March, Dr. Drake, being "dissatisfied," as he says, "with the Medical College, and not relishing the idea of a removal to a strange town of prospects inferior to those of Cincinnati," resigned his professorship.* But his temporary escape from the turmoils of his life in Cincinnati was attended by one beneficial effect. He had become a dyspeptic under the pressure of his exhausting, anxious labors, and from December till May preceding his removal to Lexington, had decreased so much in weight that he became alarmed. Under the favorable influences that surrounded him in that city, cheerful society, "a full diet, exemption from care, and ten hours sleep in the twenty-four," he regained his health. Writing in December, he says—"I already weigh an eighth part more than I did last summer, and have not had a paroxysm of dyspepsia since I reached Lexington."

It is not known how early Dr. Drake began to entertain the project of founding a medical school in Cincinnati, but it is probable that he had conceived the design before leaving Lexington. Comparing the advantages of the two places as sites for such an institution, the superiority must have appeared to him immensely on the side of the former city. At the first meeting of the Ohio Legislature after his resignation in Transylvania, we accordingly find him applying for a charter. His wisdom was evinced by his application, at the same time, for a charter for a hospital to be connected with the medical school. Both charters were granted in the winter 1818–19, and an appropriation was made by the Legislature sufficient to put the institutions in operation. The professors of the Medical College were *ex officio* the physicians to the hospital. Everything on the part of the author of the enterprise was planned with singular judgment, except one. By a provision of the charter of the Medical College, the appointing power and also the power of removal was given to the professors. Through this door endless difficulties entered. The retirement of Dr. Drake from the Lexington school was followed by bitter controversies with his colleagues. Intrigues, strifes, and disappointments met him at the threshold of the Medical College of Ohio. He failed to get it organized in time to commence with the medical school at Lexington, which, under a new organization, opened its second session in the autumn of 1819. "You will see by the newspapers," he writes, "that the Medical College will not be organized this winter. This to me is a sore disappointment, and no slight mortification. The publication alluded to will give you but an inadequate idea of the intrigues of Dr. B. and the conduct which led to our failure. I do not, however, despair." In all the thirty-three years that followed, amid failures almost numberless, he never wholly despaired of that first great enterprise of his life.

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* The Faculty, besides Dr. Drake, consisted of Dr. Benjamin W. Dudley, professor of Anatomy and Surgery, Dr. James Overton, Theory and Practice of Medicine, Dr. Wm. H. Richardson, Midwifery, and James Blythe, D. D., Chemistry.

At length a circular was issued, and in 1820 the College went into operation with five professors. Its first class was small—only five more than that of the abortive session in Transylvania three years before, and a great deal less than a third of the one then assembled in the rival institution. Its second class was less encouraging than the first, the increase being only five, while the additions to the class at Lexington amounted to forty-five. Added to these dispiriting circumstances, jealousies and angry contests soon arose in the Faculty. The school had disappointed all parties. It was natural for men to become dissatisfied with an organization which had proved so unattractive; and it was human nature to seek for the causes of failure in the bad conduct or incompetency of others. Dr. Drake was the originator of the College, the author of its charter, the framer of its organization, the president of its faculty—its embodiment, its head, its soul. His colleagues, Dr. Jesse Smith and Dr. Elijah Slack, the only two remaining, seem to have argued, that, being *the school*, he was responsible for the deplorable state to which it had come, and therefore resolved to remove him. A meeting of the Faculty was held in the spring of 1822, Dr. Drake presiding as usual, when a motion was made by Professor Smith, that "Dr. Drake be expelled from his professorship." "Is the motion seconded," demanded the Chair? "I second the motion," responded Professor Slack. "It is moved and seconded, that Dr. Drake be expelled from his professorship. Are you ready for the question? All those who are in favor of the motion, will say aye." There were two voices in the affirmative. "The ayes have it; Dr. Drake is expelled." And Dr. Slack lighted the extruded President down the stair-way with the only candle in that dark chamber.

We are left to conjecture what were the emotions of the professors left behind at the consummation of this deed; but it is hardly to be supposed, that they had even a faint conception of the mischief they had wrought. The feet had said to the head, "*we have no need of thee!*" The school, deprived of its support, lost half its students the first session, and the next was temporarily suspended. Its friends believe that it has never recovered from the shock. Dr. Drake's "Narrative of the Rise and Fall" of the Medical College of Ohio, which we remember to have read thirty years ago, is one of the rarest tracts, in its way, to be found in the history of medical controversies.

In 1823, Dr. Drake accepted, a second time, the chair of Materia Medica in Transylvania University. The period of his return to Lexington was a favorable one. The school was rising rapidly into public favor. Its rival at Cincinnati was for the time being extinct, and it was without a competitor west of the mountains. Its rapid growth continued for three sessions after Dr. Drake's appointment, when its class numbered 281. He was now in the prime of life, full of energy and zeal, with a mind enriched by many years of study, and disciplined by severe experience. He took at once, as we are able to state from personal observation, a high rank among the great minds that then adorned Transylvania University. Shortly after he entered upon his duties he wrote to a friend: "I have for the last month been engaged to the most intense degree—first in attendance on some distant patients, after-afterwards in the preparation of an introductory lecture, and a Latin address, to be delivered in reply to the President, on my inauguration." His introductory lecture was received with great applause, and published at the request of the class. "The winter," says his biographer, "flowed on more peacefully and cheerfully to him than had any one in several years. For five years he had been harassed by various duties, by ambitious enterprises, by commercial embarrassments, and vexatious controversies in his profession. He was now relieved, at least from the sight and responsibility of the difficulties and controversies he left behind, and enjoyed a period of rest and peace."

Dr. Drake continued his connection with Transylvania University for four sessions, passing his summers in Cincinnati. At the close of the second session Dr. Samuel Brown resigned, and Dr. Drake was transferred to the chair of Theory and Practice of Medicine. Before entering upon the duties of the next winter, he lost his amiable and beloved wife, who died of dysentery in the summer of 1825. During that winter he experienced an attack of what he considered congestion of the brain, and was for many days seriously ill. At the close of the following session he resigned his place. He found the school, not as his biographer has it, with "some one hundred and forty students," but with 171; and he left it, not "in 1826, with 281," but in 1827, with 190 students. Dr. Mansfield is inexcusable for the commission of such errors. He might have avoided them by a little attention to his own figures on the 271st page of his book, and have satisfied himself, that "in the absence of other reasons for such marked fluctuations," a satisfactory one was *not* to be found in Dr. Drake's resignation. The most marked fluctuation occurred while Dr. Drake was in the school.

Dr. Drake's career as a public teacher in Lexington, though brief, was a brilliant one, and in strong contrast with that which had closed so painfully a few years before in Cincinnati. He lectured to large, and until the last year of his stay in the school, to annually increasing classes, who rewarded his efforts with a full measure of applause. He was repeatedly engaged in public discussions with some of the most accomplished scholars of Lexington, and from every contest came off with a reputation enhanced for learning, eloquence, and vigor of mind. As a lecturer, few were more highly esteemed; as a public debater, he was universally admired. If he had been content to remain, it appears to us at this day evident, that he had a peaceful, successful course of many years before him. It may be, that he had doubts of the capacity of Lexington to sustain a large medical school, and that he looked upon the sudden declension of the class as a symptom of incipient decay. Whether from considerations of this nature, or from his strong attachment to his early home, he resigned his chair in March, 1827, and returned to the practice of physic in Cincinnati.

But the excitement of private practice did not satisfy his active mind, and he soon became connected with a medical journal, which he conducted for many years under the title of the *Western Journal of the Medical and Physical Sciences.* In the first number he expressed his determination to go on with the work on the diseases of the Mississippi Valley, of which he had given notice several years before. He showed himself a laborious, persevering editor, and wrote much and ably for his journal, sustaining it for twelve years with little assistance, under a load of discouragements which few men would have had the heart to encounter. A short time after returning to Cincinnati, he interested himself in the establishment of an Eye Infirmary, at which for several years he was an active operating surgeon. About this time the great Temperance movement began, and Dr. Drake embarked in the cause with his accustomed ardor—an ardor which never abated to the end of his life. He was a frequent speaker on the subject. His speeches were always forcible, often eloquent, but sometimes a little tedious. In the midst of one which he was delivering on a hot day in summer, after he had spoken for more than an hour without any indications of approaching the close, one of the auditors, from the force of habit, cried out, "Let us adjourn a while, and take a drink!" The meeting, we are told by his biographer, did adjourn, and after refreshing themselves at a tavern hard by, returned and heard the orator to the end of his discourse.

Engaged in the practice of medicine, in operations at his Eye Infirmary, in editing his medical journal, and taking an interest in all the great public questions of the day, three years of Dr. Drake's life passed, when he was again called to a medical school. In 1830, the trustees and faculty of Jefferson Medical College, Philadelphia, invited him to take the chair of Theory and Practice in that institution. He accepted the offer, but still without any purpose of quitting Cincinnati; and in the spring following, he returned with a project for a second medical school in that city. His success at Philadelphia was satisfactory. The class numbered one hundred. He lost nothing by comparison with the ablest teachers of medicine in that renowned seat of medical learning. But he could not abandon the idea of building up a great school of medicine on the banks of the Ohio. His present scheme was to organize a medical faculty under the Charter of the Miami University, and he was successful in inducing Dr. Eberle and some other men of talents, to unite with him in the enterprise; but after he had got his faculty completed, a proposition was made by the trustees of the Medical College of Ohio, to unite the professors of the two schools. Three of Dr. Drake's colleagues favored the proposition, and were elected to chairs in the College. A professorship was also created for Dr. Drake, and the school under the new arrangement opened with a good class; but the session was stormy; schisms soon grew up in the Faculty; there was dissatisfaction among the students; the supplemental chair of Clinical Medicine was found to be inadequately furnished with materials for illustration, and with feelings of sad disappointment, Dr. Drake tendered his resignation at the close of the first term. Upon this occasion he wrote to one of his former associates in the city of Lexington, that he "had renounced medical schools forever."

He returned once more to the quiet pursuits of practice and of authorship. In the next few years he produced in his medical journal a number of elaborate and valuable papers. Cholera broke out in Cincinnati in the fall of 1832, and was made the subject of a volume which he published shortly after the subsidence of the epidemic. But amid these occupations his mind reverted as eagerly as ever to the scheme of erecting a medical school upon the site of his first fruitless undertaking. Accordingly we find him a few years later busily at work organizing a new medical faculty; and at last he succeeded in forming one to his wishes. His coadjutors were able men, and had the rare advantage of being harmonious. They formed the Medical Faculty of the Cincinnati College, and in October, 1835, commenced their first course of lectures. The prospects of the new College were on many accounts encouraging, and for a time it seemed to prosper; but there were two circumstances, relating to it, fatal to its perpetuity—the existence of the old, endowed school, and its own want of an endowment. It struggled bravely on through four sessions and then, in 1839, went down. Dr. Parker, having been appointed to the chair of Surgery in the College of Physicians and Surgeons of New-York, was the first to abandon it; he was followed by Dr. Gross, and when all his colleagues had resigned, Dr. Drake reluctantly gave it up, relinquishing once again the cherished hope of connecting his name with an enduring medical institution in Cincinnati.

Not many weeks after his resignation, he was invited by the faculty and trustees to a professorship in the Medical Institute of Louisville, which had been founded two years before. The circumstances connected with this appointment were peculiarly flattering to Dr. Drake. The chair to which he was called, had been created for his accommodation. The professors who united in the invitation had, nearly all, sustained to him at one time the relation of pupils or of colleagues. As in the case of the other Kentucky medical school which he entered sixteen years before, he found the Medical Institute a growing school. His success, now as in the former instance, was complete. Time and many reverses had in no degree abated his enthusiasm, while they had matured his experience, and enlarged the stores of his knowledge. He entered into the affairs of the school with the greatest zeal, and put forth his best powers as a teacher. He rose at once to the highest popularity. A few months after he became connected with the Institute, a movement was set on foot to transfer its property and government from the hands of its trustees to those of another board, by which, it was thought, its safety would be seriously jeoparded. Dr. Drake manifested the deepest concern on the occasion, and exerted himself strenuously to defeat the hostile measure. It brought forcibly to his mind the machinations by which his cherished plans had been so often frustrated in a neighboring city. In view of its probable success, and contemplating the ruin it appeared likely to bring upon the school in which he had just embarked, he was one day heard to exclaim—"*Medical schools have consumed me!*" But the blow was averted, and the Medical Institute went on prosperously.

Dr. Drake now enjoyed ten years of peace. The period of his labors in the medical school of Louisville was the halcyon period of his life. It was also the period of his greatest prosperity. When he had been a few years in the school, he one evening met some of his colleagues, and, with a face bright with joy, remarked to them, that "he found himself that day, for the first time in twenty-five years, out of debt." Released from all anxiety about pecuniary engagements, and relieved also from the corroding cares in which his numerous medical school enterprises had immersed him, escaped from the angry contests in which he had passed so many of the best years of his life; he was left at last free to indulge his taste for study, and began, in earnest, the preparation of the work upon which his fame will hereafter chiefly rest.

On coming to Louisville, Dr. Drake transferred the subscription-list of the Western Journal of the Medical and Physical Sciences to the publishers of the projected Western Journal of Medicine and Surgery, of which he became one of the editors, and for which, during his connection with it, he prepared some very able articles, and wrote many short, practical, or humorous papers, in a playful, easy style, that gave variety and life to its pages. The professorship to which he was appointed in the Medical Institute was that of Clinical Medicine and Pathological Anatomy, but on the resignation of Dr. Cooke, in 1844, he was transferred to the chair of Pathology and Practice. In 1841, early in the spring, he commenced a series of travels which he continued for several years, with a view to the collection of materials for his long promised work. In the fulfillment of his plan he deemed it necessary to visit every quarter of the great valley upon the diseases of which he proposed to write, from the Gulf of Mexico to the Northern Lakes, and from the Appalachians as far west as civilization had extended towards the Rocky Mountains. The first year he descended the Mississippi river to New Orleans, crossed over the Bays of Mobile and Pensacola, and inspected the medical topography of those regions and of Alabama. The spring ensuing he descended the Mississippi a second time, extending his observations as far as the Balize, and, returning, visited the interior of Mississippi, Tennessee, and Missouri. Continuing these excursions, from year to year, he traveled over much of Kentucky and Ohio, explored the localities in Indiana and Illinois most interesting to the physician, and took a survey of the western parts of Pennsylvania and New York, and of the country from the mouth of the St. Lawrence to Lake Superior. The field comprehended in this survey is immense; the labor required for it will be admitted to have been great.

In 1850, after nine years of journeying, and of toiling at the desk, the first volume of the elaborate work was at last brought forth.* It was hailed by the most competent critics, by all the medical journals of our country and by some of the ablest abroad, as a production worthy of the time and labor it had cost its author. It is indeed a work in every sense entitled to the appellation, great — great for the mass of original observations it embodies — great for its laborious research, for its wide, comprehensive scope, and for the philosophical spirit with which it is instinct. In these characteristics it has no equal among American medical productions. It has not yet attained to the popularity that it deserves; few physicians comparatively, we fear, are acquainted with it. But whether it ever gains a currency equal to its merits or not, it is embalmed in the profession. It can hardly be superseded or forgotten. As long as the climate, medical topography, and diseases of the country of which it treats are matters of investigation, it will continue to form a necessary work of reference. Its large accumulation of facts, its careful scientific observations can never lose their value. It was during the ten years of his harmonious connection with the medical school of Louisville that Dr. Drake found leisure to produce a work thus honorable to himself and creditable to his country. He died before completing the second volume, but it has been edited and issued since his death in a shape worthy of his reputation, by Dr. S. Hanbury Smith and Dr. Francis G. Smith.

When the first volume of his Treatise was about going to the press in Cincinnati, Dr. Drake began, for the first time, to show some signs of a disposition to quit the peaceful residence he had enjoyed so long. He had never become a citizen of Louisville, but during all his stay here had still regarded Cincinnati as his home. In February, 1849, he sent in his resignation to the board of trustees, to take effect at the termination of the session. He was approaching his sixty-fifth year, and complained of a law of the board by which a professor was declared superannuated at that age. The board assured him that the law had no application to himself and invited him to withdraw his letter of resignation. His colleagues united in a pressing request that he would continue. But that *ignis fatuus* which had so often lured him into trouble was again before his eyes. He went back to renew, once more, the hopeless effort of resuscitating the Ohio Medical College. Disappointment and defeat had never shaken his constancy to tha tinstitution. The hope, "there to return and die at home at last," had never forsaken him. In an introductory lecture delivered to the Students of that College on his return he says:

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* A Systematic Treatise, historical, etiological, and practical, on the Principal Diseases of the interior valley of North America, as they appear in the Caucasian, African, Indian, and Esquimaux varieties of its population.

> "My heart still fondly turned to my first love, your alma mater. Her image, glowing in the warm and radiant tints of earlier life, was ever in my view. Transylvania had been reorganized in 1819, and included in its faculty Professor Dudley, whose surgical fame had already spread throughout the West, and that paragon of labor and perseverance, Professor Caldwell, now a veteran octogenarian. In the year after my separation from this school, I was recalled to that; but neither the eloquence of colleagues, nor the greeting of the largest classes, which the University ever enjoyed, could drive that beautiful image from my mind. After four sessions I resigned; and was subsequently called to Jefferson Medical college, Philadelphia; but the image mingled with my shadow; and when we reached the summit of the mountain, it bade me stop and gaze upon the silvery cloud which hung over the place where you are now assembled. Afterward, in the medical department of Cincinnati College, I lectured with men of power, to young men thirsting for knowledge; but the image still hovered round me. I was then invited to Louisville, became a member of one of the ablest faculties ever embodied in the West, and saw the halls of the University rapidly filled. But when I looked on the faces of four hundred students, behold! the image was in their midst. While there I prosecuted an extensive course of personal inquiry into the causes and cure of the diseases of the interior of the continent; and in journeyings by day, and journeyings by night—on the water, and on the land—while struggling through the matted rushes, where the Mississippi mingled with the gulf—or camping with Indians and Canadian boatmen, under the pines and birches of Lake Superior, the image was still my faithful companion, and whispered sweet words of encouragement and hope. I bided my time; and after twice doubling the period through which Jacob waited for his Rachel, the united voice of the

trustees and professors has recalled me to the chair which I held in the beginning."

But his warm fancies were again illusive. He toiled on through one tedious winter and resigned. While in the University of Louisville, he had seen the number of the class rise to above four hundred; he had seen it, the winter before he left the school, fall to three hundred and thirty-three; but he learned, while the wearisome session in the Ohio Medical College was dragging its slow length along, that the number of *bona fide* students in Louisville was greater than it had ever been before. During the summer following, the chair, which he had relinquished a little more than a year previous, became again vacant. Dr. Bartlett, one of the most pleasing and attractive teachers whose voice has ever been heard in a school of medicine, retired, after delivering a single course of lectures, on account of physical infirmities, which rendered traveling difficult, and accepted a place in a school nearer his New England home. Dr. Drake was again invited to Louisville, and his former pupils, who had been a winter absent from the University, found him, in 1850, reinstated in the chair from which they had liked so well to listen to his instructions. Here he continued for two winters, lecturing with his accustomed animation, and devoting all his leisure hours assiduously to the completion of the second volume of his Treatise. But at the close of the second session he again resigned his professorship, and returned to re-commence his sisyphian labors in Cincinnati.

To the history of these twelve successful years of Dr. Drake's life in the Medical School of Louisville his biographer devotes just ten lines. Every local institution and every business enterprise in which Dr. Drake ever participated in Cincinnati—"Buckeye Clubs," canals, ephemeral schools and colleges, temporary eye-infirmaries—receive a full share of his biographer's attention; but the medical school, in which he passed nearly a fourth part of his professional life, and where he found quiet and ease and independence, after long years of turmoil and unavailing labor, is disposed of in less than one short paragraph. Tedious histories are given of newspapers quite forgotten, and of citizens unknown out of Cincinnati; and a whole chapter is devoted to a railroad having no existence, except upon paper, for which Dr. Drake chanced to write a report, and Dr. Mansfield had the honor to make a map. But ten feeble lines are all that can be spared for a history of those fruitful years in which Dr. Drake achieved the great labor of his life. We are informed, with a provoking minuteness, where the wheat fields and peach orchards flourished, and the foundries and taverns stood, in the days when the Queen City was a village; but the reader must look carefully to learn where it was that Dr. Drake found time and the necessary means to prepare a work, of which his biographer says, with a critical acuteness entirely his own, that "there is more of labor and absolute research, and more of *original composition* in it, than there is in either of the performances (dictionaries) of Johnson *and* Webster!"

Dr. Drake returned to the Medical College of Ohio in 1852 with high hopes. Dr. Cobb, who, like himself, had been an early officer in the Medical College of Ohio, was returning with him to aid him in giving a new impulse to the institution. But his evil genius, which had balked all his schemes concerning that school for more than thirty years, was relentless. Discord met him at the door of the college. At so late a day, after so many painful endeavors, so many bitter disappointments, this ominous beginning was too much even for his buoyant spirit. He went home from one of the first Faculty meetings in despair.

A few evenings after, the citizens of Cincinnati had met to pay their respect to the memory of Daniel Webster. Dr. Drake was indisposed, but he could not refrain from being present at the meeting. "Having recently taken part in the funeral services of another great American, (Henry Clay,) he said he would not yield to an expression of his emotions on the present occasion; but, before he sat down, he would point attention to the manner of this illustrious man's death, and to those utterances which, from the solemnity of the occasion, and because they were the last words of Daniel Webster, would forever stand out among the most prominent, and the most frequently turned to by posterity. 'As an humble professor of the Christian religion, I call the attention of the young men of this country to Daniel Webster's dying declaration of the value of the Christian religion, of man's utter dependence on divine mercy. To the example of the mightiest intellect of the age, let me point those who have thought religion not mete for men of culture and genius. Who shall say that the simple utterance of the departed statesman—*thy rod, thy rod, thy staff, thy staff, they comfort me*—does not constitute the *greatest act of that life of great acts?*' "

That evening, after returning home, he had a chill and passed an uncomfortable night. He suffered much with his head, and bled himself a few evenings afterwards; and, while his daughter was applying a bandage to his arm, became insensible. He was greatly prostrated by the operation of some senna which he took the night following. In a few days after his attack, he became apprehensive of the result, and gave directions about his will.

His daughter, Mrs. Campbell, gives the following account of his last hours:

" On Sunday previous to his death, sitting with Mr. McGuffey, he bemoaned his inability to think or feel, saying that he seemed to have suffered a complete *emotional annihilation;* that he was not able to feel any interest in anything: that even eternal things seemed to have lost their interest; but that he remembered that years before he had offered himsef to the Savior, and had ever since enjoyed a constantly increasing hope of acceptance; and that *that memory* (for in his present condition it was nothing more) was an unspeakable comfort and solace to him; that he clung to that only.

On Monday he talked to Mr. McGuffey of the condition of his great work, saying that to complete it had been his only ambition, and that he hoped God would spare him for that end.

On Tuesday his sufferings were so great, that he had no longer any hope or desire for recovery. He said that God had taught him the folly of all earthly hopes, the vanity of all human expectations; that he no longer desired to live to finish his book; and that his sufferings from nervous atrophy were so great, that bodily pain would be a luxury.

Wednesday night he was suffering great distress—not pain, but great mental distress—which he could describe in no other way than that he had 'a horror.' About 4 o'clock he said he wished to see Rev. Mr. Tyng, and when I told him that he was absent from the city, he desired to see Rev. Dr. Rice. I sent for him, and he came immediately. Father conversed rationally with him, though even his prayers and conversation could not, for a moment, dispel the dreadful distress he was suffering.

On Thursday evening he said to me that the vital powers were all failing. The family retired at 8 o'clock, and as I sat by his bed, he took my hand, and said in a perfectly natural tone, 'well, my daughter.' He then attempted to feel his pulse and raised his hands to observe the nervous twitching in them; and when I said to him, 'You have had that ever since you were sick,' he replied, 'Yes, my sickness in 1825 left me just in this condition.' I believe these were the last words he ever spoke."

He died on the day following, Friday November 5th, in the 68th year of his age.

Dr. Drake united himself with the Episcopal Church a short time after he became connected with the Medical Institute of Louisville, and lived a sincere humble Christian.

Dr. Drake was in the habit of saying that he "had resigned more professorships and been oftener expelled than any medical teacher in the United States." His appointments in medical schools amounted, from first to last, to not less than ten, and he was connected during his life with five institutions, two of which were of his own projecting. Towards the close of his life he expressed regret at these frequent changes, and lamented that it had not been his good fortune to maintain one station through his whole career. If his first enterprise had succeeded, or, when that failed, if he could have been content to identify himself with either of the schools of Kentucky in which he labored for a time so successfully, it is easy now to see that many of those years which were wasted in fruitless endeavors might have been saved to the profession. It is a significant fact that, from the first time when in Lexington he obtained a respite from dyspepsia to the last winter of his sojourn in the University of Louisville, as often as he came to Kentucky he found relief from pecuniary pressure, and with it tranquility and peace, and that as often as he returned to Cincinnati, it was only to encounter jealousy, opposition to his darling projects, and mortifying failure.

To uncommon vigor Dr. Drake added great activity and versatility of mind. He possessed a considerable share of the poetical faculty, indications of which will strike every one in the passages quoted from him in this article, and of which his writings abound in beautiful examples. This gave elevation and beauty to his public discourses and enlivened his daily lectures on disease. On whatever subject he wrote or spoke, there was an originality and a truthfulness in his thoughts and sentiments, and a simplicity and purity in his language that always pleased. He was of an excitable temperament, and when he became interested in his subject spoke with fluency, great animation, and eloquence. His manner was perhaps too declamatory for a lecturer on medicine. Professor Gross compares his style of speaking to that of a Methodist preacher, often listened to in his boyhood, "who seemed always to be wrestling for a blessing, in a way so ardent and zealous as to inspire the idea that he was determined to obtain what he asked." The comparison gives a just idea of Dr. Drake's singularly earnest manner. We doubt if such a manner was the best for a teacher of pathology and practice. It is conceded that Dr. Drake was not so popular as some other teachers of confessedly less learning and talents. His biographer thinks there were sufficient reasons for this "in the almost impossibility of bringing great minds into sympathy, on scientific subjects, with inferior ones." This is all mere stuff. No such impossibility has been experienced by great minds. Sir Humphrey Davy found no difficulty in impressing the popular mind of his day. Faraday and Liebig, in our times, have found it quite possible to bring their great minds "into sympathy" with audiences of every grade of intellect and with whole nations of men. If Dr. Drake had lectured with less vehemence, if he had been more calm and deliberate, had broken up his subject in such a way as to have brought out more strikingly the salient points, we are convinced that he would have been a more successful instructor. But if his manner was too impassioned for the didactic themes upon which he usually discoursed, it was well adapted to those rarer occasions on which he was called to engage in public discussion. Then it was that all his fine powers shone forth. His earnestness, his ready wit, his keen repartee, his logical acumen, combined with his great and diversified stores of knowledge rendered him one of the most powerful of debaters.

The turn of his mind was as practical as its powers were versatile. He indulged in few speculations and had no hobbies in medicine, in which facts and phenomena were the only things that interested him. He wedded himself to no system, but maintained his understanding in a state open to conviction, and thus, to the end of his life, kept pace with the progress of medical science.

Besides medical schools and medical education, which, with the practice of physic, seemed to engross his whole attention, he entered actively into all the great questions of the times. Few men of the age have delivered so many temperance addresses. While in Louisville he organized a Temperance Society among the officers and students of the University for the investigation of the effects of alcoholic drinks upon the human body, and devoted himself to its objects for a number of years with untiring zeal. He took a lively interest in internal improvement, and labored assiduously for the execution of numerous canal and railroad schemes. He organized public schools and watched over general education with paternal solicitude. He delivered many courses of popular lectures, in one of which, in Louisville, his fervid appeal in behalf of the blind led to the creation of one of the noblest charities in this city. In the midst of all he found time to write essays on politics, slavery, and church polity, which have generally commended themselves to the judgment of candid and able men for their original, no less than their enlightened and liberal views.

Such was the life and character of one of the most remarkable men who have adorned the medical profession in America. Of the volume before us commemorative of his life and services, our opinion may be expressed in a few words. So far as the memoirs consist of Dr. Drake's own narrative of his life and of the contributions of his friends, they are exceedingly interesting; so far as they are the production of the biographer, they are intolerably tedious and vapid. Unfortunately the former bear to the latter only the proportion that the spots of verdure in the desert bear to the interminable waste of sands. As a life of Dr. Drake, the volume is inaccurate, unsatisfactory, and meagre; as a history of everything in which it is not to be supposed that the reader of Dr. Drake's memoirs feels the slightest interest, it is full to satiety—*usque ad nauseam.* There is but one way in which it can be made a readable book. If the publishers will take the trouble to revise it, carefully expunging all the biographer's sentiment, all his attempts at philosophy, all his medical theorizing, his long lists of names of citizens who took part in "Buckeye" celebrations and the like, his irrelevant biographies, and his dull histories of horse-ferries, steamboat navigation, and newspapers, they will greatly dwarf its size indeed, but they will wonderfully increase its spirit. Let them suppress nearly the whole of the biographer's contributions, retaining but little besides the autobiography, and they will make of it a volume which will be extensively read, and will exert a happy influence upon the youth of our country. 𝔍. 𝔓. 𝔜.

ART. II.—*August Gottlieb Richter; his Works and his Cotemporaries. A Retrospective Review.*

"It has often been said that those who disregard the past, do not concern themselves much about the future."

WHO was August Gottlieb Richter? He was surgeon, teacher, author; one of the men of his age and country, who planted, not for hour and day, but for eternity. He may, for ought we know, have been cousin of Jean Paul, poet and philosopher; for the twain were cotemporary. However this may be, August Gottlieb Richter held the same rank in the republic of surgery that Jean Paul Richter held in that of letters. He was at once hierarch and bishop of his profession; he performed well and nobly his mission, not only for his, but for all succeeding time. The latter part of the last century found him upon the active theater of life, manfully battling with disease and death; the early part of the present received his benediction, his last breath, and his ashes.

But what, it may be asked, has the journalist of the present day to do with August Gottlieb Richter, or his works and his cotemporaries? Are they not all dead, gone, obsolete, buried out of sight? They are; and yet are they not without their value even now, in an age more marked by speed than genuine progress, by the superficial than the profound. Should a man be forgotten, because he has ceased to breathe? Has he not left his works for our benefit? Wherefor did the Coan Sage write? for his age and country alone, or for all mankind? The divine Greek, the interpreter of God's word in disease, lives as much now as he did three centuries before Christ. He was the Homer of the profession then, as he has been its father ever since. Is the past not replete with the treasures of science? Is it not the repository in which are garnered the knowledge and the wisdom of former ages? Are not its strata everywhere overlaid and inlaid and underlaid by the organic remains of the human mind, rich, massive, and splendid, like the gold beds of Ophir, and the sparkling mines of Golconda? Are not the precious sands of erudition visible everywhere, as if they had been broadcast over the face of the earth? Let history, drawing its materials from the various epochs of the world, answer these questions. The inquisitive student, who busies himself in exploring the arcana of the past, finds himself abundantly rewarded, at every step of his progress, by the astounding revelations which attend his labors. Every stroke of the pick-axe and the spade discloses to his admiring gaze some new object of instruction and delight. As he lifts the veil, and proceeds in his task, he fancies almost that the past is the present, and that the great chain which he has touched, as with the wand of the magician, extends from "Nature up to Nature's God," in one harmonious whole. He beholds, spread out before him, all the wondrous performances of the human intellect, from the time of his first parents in Paradise, down to the latest breath of his nostrils. He reads, in his Bible, the history of creation, the fall of Adam and Eve, the dispersion of the human race, and the mission of the Messiah; and in the works of man, the record of the achievements of that divine flatus which connects him with his Maker, and gives him a title and a claim to immortality. Subjecting to the alembic of his mind the rich and diversified materials thus derived, he separates the gold from the dross, the true from the spurious, and holds on, with a firm and undying grasp, to the truths of the past, as sublime, as immutable, and as eternal, as those of the present. It is his legacy; the reward of his constancy, of his labors, and of his sacrifices.

Every nation has its past not less than its present. The untutored savage has his traditions; the civilized man has his books. Both are retrospective, both prospective beings: neither is satisfied with the present. Each has a world behind him, as well as a world before him, from the gushing fountains of which he may, if he but will, imbibe knowledge and wisdom and experience. Every rational being is a participle of three tenses, past, present, and future. If there were no past, science would be a myth; the human mind a desert. Evil would preponderate over good, and darkness would overspread the face of the moral and scientific world. But Providence has not so ordered it: the brain-prints of man are conspicuous everywhere; and the works of God bear testimony everywhere, and in all ages since the creation of man, to man's progress, and to man's intellectual supremacy in the arts and sciences.

The close of the last and the commencement of the present century form a proud epoch in the history of surgery and medicine. It is questionable whether these departments of human knowledge were ever cultivated with more ardor and success, in any period of the world, ancient or modern. The sun of science shone with peculiar splendor. Everywhere, in all countries which had experienced the ameliorating and humanizing influences of civilization, the votaries of science were pressing forward in their efforts to promote her interests and extend her domain. The nations of the earth were literally vieing with each other for the palm of victory. Germany, England, France, and Italy stood foremost in the great and all-absorbing contest. Time passed; and the result of the vast army of collaborators was placed upon the universal altar of science. National jealousy ceased; and the men who had thus toiled and struggled for the ascendancy, met at the congress of the world, interchanging friendly feeling, and vowing everlasting fidelity to each other and to their profession. Universal peace was decreed; and henceforth and forever, neither science nor the cultivators of science were to know any national feeling, distinction, or difference.

Among the great men who thus battled for their profession, and for the national honor, August Gottlieb Richter occupied a conspicuous rank. He was the chieftain of his day in surgery, in Germany, before whom all other men, in this department of the healing art, bowed, as the commoner bows before his king, the soldier before his general. His reign, for the better part of half a century, was supreme. His growth was rapid; for it was effected, as it ever must be to be of any value, under the influence of the most indomitable industry and perseverance, guided by a chastened ambition and a lofty aspiration. Setting out, while yet the glow of early youth was upon him, with the determination to become a great and shining light in his profession, he allowed nothing to interfere with his purpose, or to allure him from his path. How well he accomplished his object, let history attest.

Zörbig, a small village in Saxony, had the honor, on the 13th of August, 1742, of giving birth to Richter. Numerous families of this name, embracing several physicians and surgeons, as well as literary men, exist in the German States; but whether they are related to August Gottlieb, we are unable to state. Of his early habits and education, nothing can be said. Doubtless he was a youth of strong mind, and of great ambition, making the best use of his time and opportunities. He studied medicine at the University of Göttingen, where his uncle, George Gottlieb Richter, was at the time professor of therapeutics, and where he received his degree in 1764. From thence he proceeded to London, Paris, Amsterdam, and Leyden, where he spent the next two years in attendance upon the prelections of John Hunter, Sabatier, Heister, and other celebrated surgeons. Returning to his native country, he was appointed, in 1766, extraordinary professer, and, in 1771, ordinary professor, of surgery in his alma mater; a position which he occupied until the day of his death, in July, 1812; a period of forty years. He was surgeon and privy-counsellor to the King of Great Britain, for Hanover, and member of many learned societies, foreign and domestic.

Richter wielded a prolific pen. As a writer, indeed, he was never idle. To compose was with him a source of elevated enjoyment. What he observed he was anxious to record, and what he recorded he was anxious to publish. In these respects he showed himself both a wise and a good man; wise, because he thus extended his own knowledge; good, because he thus contributed to the knowledge of others. He was an accurate observer of nature, and a faithful interpreter of her laws. His experience, extending through a period of nearly half a century, was boundless. As a surgeon, his practice reached over a large territory, which poured into his lap all the rare and important cases of disease and accident. People flocked to him from all parts of the country to be cured of their infirmities. All the great operations in Göttingen and in the "region round about" were performed by Richter. His influence was supreme; he wielded the sceptre of a tyrant; no one dared to question his right. He was monarch as much as his

King. The sick, the halt, the lame, the blind, and the deaf were his subjects, and never was monarch or king more beloved and venerated. Of his operative skill history is, unfortunately, silent; but who, considering the profound anatomical knowledge of Richter and his great practical resources, can doubt that it was of the very highest order? He must have possessed all the qualities of a master in this department of surgery; a steady hand, an eye that was never appalled by the sight of blood, and a degree of foresight which enabled him to meet every emergency during the trying moments of a great operation. He had none of the pusilanimity of Albert von Haller, who had preceded him in the chair of surgery in the University of Göttingen, and who is reported to have declared that, although he had taught surgery with great credit for seventeen years, yet he had never performed a surgical operation for fear of giving pain! It may be said, in this connection, that nature makes the surgeon not less than the poet and the artist. No man ever operated well, composed good verses, or painted a great picture without the aid of the divine flatus. Much, certainly, may be accomplished by education, but education alone never made a great operator. Would hard study alone have made a Homer, a Shakspeare, a Milton, a Schiller, or a Goethe? Never: without the divine breath instilled into their brain-fibre at the very moment of its creation, they never could, Prometheus-like, have drawn the fire from heaven, and enkindled the thoughts, and the feelings, and the passions of men. Richter and Dupuytren and Graefe and Liston, and the Father of Surgery of our own country, the cold but eagle-eyed Physick, never would have been what they were but for the possession of this invaluable, this god-like gift. No artist, however close and protracted his studies, ever produced a great portrait, either of man or of nature, without the aid of this quality of the human intellect. His hand may be ever so delicate, his taste ever so correct, and yet can he not, unless he has genius to guide him, paint a picture worthy of a place in the great gallery of the artists of the world. The genius of Franklin, not hard study, enabled the son of the Boston tallow-chandler to snatch the lightning from heaven, and make it subservient to his will; and a similar gift enabled Herschel to discover new planets in the immensity of space.

Richter wore gracefully his professorial robes. He sat with dignity in his academic chair. Almost daily, for forty years, he expounded to the youths who flocked to Göttingen the laws of medicine and surgery. Those who knew him best assert that his teachings were too much tinctured with the speculations of Stoll and Schröder, two of the great lights of medicine of the eighteenth century; but, however this may be, and the probability is that the statement is not altogether fictitious, he drew largely upon his own experience for the materials of his prelections. The custom of the age, from the prejudices of which August Gotlieb Richter was not wholly free, rendered necessary, in some degree, such an association. Even yet the practice is far from being obsolete in Germany. Many of the professors of that country are still in the habit of relying too much upon the authority of others, and too little upon their own. The American teacher, on the contrary, whether justly or unjustly, esteems all this as pedantry, and therefore confines himself to the delivery of his own facts and opinions, as derived from his own observation and study. The medical school of Göttingen, founded in 1736, by George the Second of England, when Elector of Brunswick and Luneberg, was, if not in the zenith of its glory, in an eminently flourishing condition during the period of Richters' connection with it, and much of the reputation which it then enjoyed was no doubt due to his popularity as its professor of surgery. Pupils came from every quarter, attracted mainly by the fame of this great man and by the prestige of Haller's name, so intimately and undyingly associated with the progress of physiology in the middle of the last century. Richter, Haller, Zinn and Röderer were colleagues at Göttingen, as were Blumenbach, Osiander, Himly and Langenbeck at a later period. With such illustrious men at its head, its school could not fail to attain the very highest rank among similar institutions in Germany. The fame of Göttingen, however, as a seminary of medicine, has long been waning.

Richter was by far the most abundant surgical writer of his age. No other man of the last century, or indeed of any part of this, can boast of the same amount of literary labor. He wrote not only much but he wrote well on a great variety of topics, both chirurgical and medical. His literary career commenced with his graduation, and continued uninterruptedly until the close of his life. Never did pen move more rapidly, or do better service in the cause of medicine and humanity. His inaugural thesis, entitled "Dissertatio de prisca Roma in medicos suos haud iniqua," bears the date of his professional birth, and was speedily followed by his treatise on the different methods of extracting the cataract, and by three volumes of surgical observations. In 1771 he founded his celebrated "Chirurgische Bibliothek," the only journal of surgery at that time in Europe. This work, after having passed through fifteen volumes, was finally suspended in 1796. It was edited with marked ability; and, reflecting, as it does, the state of surgery of the last quarter of the eighteenth century, it must be regarded as an enterprise of vast utility. It was the forerunner and progenitor of the "Neue Bibliothek fur die Chirurgie und Ophthalmologie" of C. J. M. Langenbeck, Richter's successor in the chair of surgery at Göttingen, and one of the most illustrious teachers and operators of Europe. Surgical journals have since become more abundant in Germany, and the example set by Richter has been imitated in other countries, especially in France and Belgium. It may appear strange, but the fact is indisputable, that England and America have never had any periodicals of this description.

In 1777–79, Richter published his treatise on hernia in two octavo volumes. The work was shortly afterwards honored with a French translation by Rougemont, of Paris, and established for its learned author a European reputation. In 1780 appeared his tracts on external antiphlogistic remedies, and on fractures of the skull. But the great works of Richter, those which connect him with his age, and which have procured for him a place among the illustrious men of the past and present centuries, remain to be mentioned. They are his "Anfangsgrunde der Wundarzneykunst" and his "Specielle Therapie," the former in seven, the latter in nine volumes! The treatise on therapeutics was a posthumous work, edited by Georg August Richter, a nephew of the author. Besides these and other productions, which our space will not permit us even to enumerate, Richter contributed numerous essays and papers to the Transactions of the Royal Society of Göttingen, of which he was one of the brightest ornaments and most active members.

The elements of surgery, the only one of Richter's great works with which we have to do on this occasion, are written in the true spirit of the Baconian philosophy. Every page attests the science and erudition of the noble author. In point of style it would be hard to find anything more clear and definite in any writer, whether ancient or modern. A remarkable simplicity pervades the work from beginning to end. A love of truth, a desire to epitomize the great facts of surgery, and a wish to do justice to the claims of his predecessors and cotemporaries, are other striking features of this great performance. No attempt at erudition, or at pedantry, is anywhere perceptible. With Richter a fact was a fact, requiring no embellishment for its apprehension on the part of the reader; it was sufficient, in his judgment, to state it in clear and concise language, devoid of all meretricious ornament and scholastic affectation. In all these, as well as in many other respects, the "Anfangsgrunde der Wundarztneykunst" of Richter are a model worthy of the imitation of writers on surgery.

Upon this work Richter spent upwards of twenty of the best and ripest years of his life. The first volume was published in 1782, and passed through several editions before the appearance of the second. The last volume was not issued until 1804, and consequently not until the author was sixty-two years of age. From this it may be inferred that it was designed to be the great work of his life, and in this wish and expectation time has shown that he had formed a just estimate of his own powers. Embodying the results of his vast experience, and a bird's eye view of the labors of his predecessors and cotemporaries, it forms an immense storehouse of facts, a sort of bridge, connecting the German surgery of the last with the German surgery of the present century. It constitutes a monument to August Gottlieb Richter, not less noble and enduring than that which Albert von Haller raised to his own memory by the publication of his great work on physiology, a work to which no modern writer has yet made even an approach.

In this work Richter developed many novel ideas respecting the pathology and practice of surgery, of which free use has been made, often without acknowledgment, by his successors, both at home and abroad. We have not time to unfold these notions, or to present anything even like a brief analysis of the contents of these seven volumes. Such a task would be as Herculean to us as it would be, in the main, unprofitable to the reader. A few facts, however, briefly stated, must not be omitted here, because they will serve to set forth more fully the claims of Richter to the respect and gratitude of the profession and of mankind.

The reader has not forgotten that one of Richter's earliest publications was on cataract. The pathology and treatment of this disease, which has engaged so much attention in Germany, were objects of special study with him even during his pupilage at the university. His favorite operation at this period of his life was extraction, which he executed with great dexterity, making the incision through the cornea with a knife of his own invention. Having witnessed, both in his own practice and in that of others, the ill effects of the premature escape of the aqueous humor, he sought to prevent this by the use of a very broad knife, capable of dividing the lower half of the cornea at one sweep. He deprecated, as a general rule, the practice, so much in vogue at that period, of steadying the eye with hooks, preferring to fix the organ with his own fingers. He did not consider a wound of the iris, during the operation, as a matter of much moment, while, on the other hand, he guarded most carefully against any displacement of the vitreous humor. In his tract on the extraction of the black cataract, published in 1773, he disclosed some very important and then novel facts relative to a species of cataract, caused by the discoloration of the liquor of Morgagni, and the diognosis of the different forms of soft cataract. These views were afterwards more fully developed in the third volume of his elements of surgery, where he also advocates the operation of depression in preference to that of extraction, experience having taught him that the resulting inflammation is usually more mild, that there is less danger of capsular cataract, and that the patient commonly obtains clearer vision. He also laid down highly important rules respecting the formation of artificial pupil, and the nature and treatment of lacrymal fistule, the latter of which he examined with great care, and invested with new interest on account of the novelty of some of his views. It is difficult, in this country, and at this remote period, to place a just estimate upon the services of Richter as an oculist, or, more correctly speaking, as a writer on the diseases of the eye. In Germany their value seems to have been fully appreciated, insomuch that he was called, even in his life time, the father of ophthalmology.

In the management of injuries of the skull, and the application of the trephine, his practice differed materially from that of other surgeons of his day. In opposition to Pott, he taught that the trephine should, as a general rule, be dispensed with until the occurrence of symptoms of compression. He advised a similar procedure in contusion of the diploe, or, more properly speaking, in fracture and depression of the external table of the skull, which, until then, had been treated immediately by trephining. His work on fractures of the skull, already alluded to, appeared in 1784.

In the treatment of nasal polyps, he preferred ligation, except where the tumor was so large, or so unwieldy in its shape, as not to admit of the application of the wire or ligature. Under such circumstances, he advised evulsion, or, where this was impracticable, on account of the danger of severe hemorrhage, the application of the actual cantery, in the hope of destroying the morbid growth by the induction of gangrene and suppuration. Modern surgeons would hardly resort to such a remedy.

Richter made some valuable suggestions in regard to the treatment of fistule of the duct of Steno. In violent inflammation of the tonsils, he recommends scarification; and, in extirpating these glands, he gave a decided preference to the knife over all other methods.

Of the treatment of wounds of the intestines, Richter had, in common with nearly all the surgeons of his day, evidently no very accurate conceptions. He considered the stitching of the opening in the bowels as useless, except in so far as this was necessary to bring the injured portion of the tube opposite the orifice in the walls of the abdomen. Where the bowel was entirely severed, he recommended the treatment of invagination, first suggested and practised by Ramdohr. Much light was thrown upon the present subject, soon after the death of Richter, by the experiments of Smith, a graduate of the University of Pennsylvania, and of Mr. Travers, of London. An account of these experiments, along with many others, performed by the writer of this notice, was published, in 1843, in the Western Journal of Medicine and Surgery, and, soon after, in a separate form.

In his treatise on hernia, published in 1777, in two volumes, Richter made many valuable suggestions, of a novel character, in relation to the anatomy and management of this accident, which he had evidently studied with much attention, both on the dead and living subject. At the commencement of his professional career, there were many matters pertaining to the nature and treatment of abdominal hernia, which have since been very thoroughly elucidated by Scarpa, Lawrence, Cloquet, and others. It will not be denied that the labors of Richter greatly lightened the researches of these distinguished anatomists and surgeons. The principal facts contained in his work on hernia, together with the results of his more enlarged experience in this field of surgery, were afterwards reproduced in the fifth volume of his "Wundarztneykunst," issued at the close of the last century. Of the value of this treatise some estimate may be formed, when it is stated that it passed through a second edition in less than six years after its publication; and that a French translation of it was made, a few years later, by J. C. Rougemont, who added to it some valuable notes, and finally made it the basis of a similar treatise of his own. In the second volume of the Transactions of the Royal Society of Göttingen, he combatted the assertion of Louis, of Paris, that it was impossible to reduce a hernia in mass, citing cases, in proof of the correctness of his views, from his own practice. He also controverted the doctrine of Le Dran—until then almost universally prevalent—that the stricture in old inguinal ruptures is generally situated a considerable distance above the external abdominal ring. In operating on strangulated hernia of this kind, he was in the habit of enlarging the opening, in the proper sac, with a pair of scissors, guided upon the index-finger of his left hand. He divided the parts freely below, carrying the incisions often down to the very bottom of the tumor; but was very careful not to prolong them high up, for fear of inducing peritoneal inflammation. He condemned the ligation of the omentum in mass, in case of hemorrhage from its vessels; and strongly insisted upon the necessity of making the patient wear a truss after the operation for strangulated hernia.

The views of Richter on the subject of cancer were, that the disease was not specific, in the true sense of that term, but that it partook of the same character as other malignant growths. His favorite remedy for dispersing cancer was belladonna. All active or severe treatment he considered as inadmissable. In scirrhus of of the mammary gland, he was an advocate for early excision, including the entire organ, and, along with it, all enlarged axillary lymphatic ganglions.

The preceding facts will suffice to show that August Gottlieb Richter was no ordinary man. The great elements of his character, which served to make him what he was and what he became, were untiring industry, a faculty of accurate observation, a definite aim in life, and an ardent love for his profession, with talents to record, and a genius to work out, the results of his vast experience, as exhibited in his various publications. Nearly fifty years of his life were devoted to the active duties of his vocation; and when, at the age of seventy, death knocked at the portals of his heart, he was still girted with the armor of his profession, ready to battle in its cause, and to throw new light upon its hidden paths. For him, life had no repose; society, no blandishments; the domestic circle, no altar. Destiny, which often rules men with a rod more cold and inflexible than iron, was forever hurrying him on over the mountains, the rocks, and the precipices, of his profession. From eighteen to twenty hours must have been his daily labor during the greater part of his long and toilsome career. His devotion to his arduous and multifarious duties never flagged. He was, in the full sense of the term, an example of a man who weds himself, heart and soul, to one object. From this object nothing could divert him. The opera and the concert had no charms for him; the song of birds fell without melody upon his ear; the green meadow, the stately forest, mountain and valley, lake and river, redolent with life and beauty, and so inviting to the eye of most men, imprinted no agreeable images upon his retina; and the choicest gifts of Flora—the rose, the lily, and the heliotrope—exhaled their sweetest perfume upon his olfactories, with hardly a respectful recognition from this great student of health and disease, this dispenser of life and death.

It may be presumed that Richter, noiselessly as he pursued his way, was not without detractors, even in the profession to which he had devoted all his time, his talents, and his life. He was too distinguished a man, too shining a mark, not to have excited the envy and even the malevolence of some of his brethren; but, if this was the case, history nowhere records the fact that he stooped to notice them. His incessant activity, his ambition, his self-respect, were all opposed to such a course. As he knew no resentment, so he allowed nothing to disturb his philosophy, or to ruffle the tranquility of his soul. He sailed over life's great ocean as calmly and as majestically as the modern steamship, freighted with its thousand passengers and its millions of treasure. As he neared the goal of his earthly career, full of years and full of honor, he met death obediently and reverently, departing in the full hope and confidence of a better and a happier state of existence beyond the grave. He was satisfied; his work was done; his mission was accomplished.

The American student, ignorant of German literature, has no conception of the vast stores of knowledge locked up in the language of Luther and of Goethe. He does not know that many of the noblest works in medicine and surgery of the present and past centuries, have been composed in that language, and that the medical men of Germany are, in this respect, as independent of the other nations of Europe, as they are, in a political sense, of the United States, Mexico, or Great Britain. Their literature, their arts, and their sciences are peculiarly their own. The fires, kindled upon their altars at the revival of learning, have burnt with constantly increasing lustre down to the present moment; and it is not too much to assert, that there is no nation on the earth who have cultivated medicine and surgery with more zeal and success than the German. There is no work on physiology, in any language, at all comparable to that of Albert von Haller, published towards the middle of the eighteenth century. It is a mighty *thesaurus*, which throws all other treatises on the subject, ancient and modern, in the shade. It literally exhausted the whole science of physiology up to the time of its publication, to say nothing of the many valuable additions, in the form of original observation and experiment, made by the author and his disciples. Consisting of eight octavo volumes, each averaging about 800 pages, it constitutes at once a vast store-house of facts, and a monument to Haller as enduring as the lofty mountains and the verdant valleys of his own country. In surgical literature Germany acknowledges no rival. A catalogue of the various surgical treatises and monographs alone would form a large volume. The work of Professor Blasius, of the University of Halle, on the operative branch of the art, a second and an enlarged edition of which was issued in 1839, holds the same honorable position in German scientific literature that the ponderous volumes of Velpeau do in the French. It is a work of immense research and erudition, which has placed its author in the foremost ranks of the scholars and scientific men of the age. The atlas of plates, accompanying the work, is the most complete of the kind ever published. Of this treatise but few of the physicians of this country have any knowledge. The Surgical Dictionary of John N. Rust, "Theoretisches-praktisches Handbuch der Chirurgie," in eighteen bulky octavoes, has no compeer in any language. It stands by itself, like an Alpine mountain, a giant among treatises and systems of surgery. And thus might we go on, enumerating work after work on the various branches of the healing art—medicine, surgery, obstetrics, physiology, anatomy, chemistry, and ophthalmology—until we exhausted the last shred of the reader's patience, and yet leave the subject wholly and entirely unfinished.

We have in our possession a very curious work—curious on account of its wonderful research and knowledge—bearing directly upon the present subject, a beautiful and closely printed octavo of 734 mortal pages, under the Latin title of BIBLIOTHECA MEDICO-CHIRURGICA ET ANATOMICO-PHYSIOLOGICA. It is in its sixth edition, and is the joint production of two learned and laborious Germans, Wilhelm Engelman and von Enstin. In gives, in alphabetical order, a complete catalogue of all the works on medicine, surgery, obstetrics, anatomy, and physiology that have appeared in Germany from the year 1750 to the end of the year 1847. It is a stupendous performance, and, of course, a great treat to the German scholar, and the lover of German medical literature. English literature contains nothing that can at all approach it. Dr. Forbes's Bibliography, in the Cyclopedia of Practical Medicine, the most recent and complete attempt of the kind in the English language, is, in comparison, altogether contemptible. Of the vast number of books, published prior to the middle of the last century, the work makes no mention, except incidentally in connection with their later editions. Beyond that period, extending as far back as the invention of the art of printing, is a long interval, rich in curious and interesting German medical treatises. Reader! if you wish to know what German medical literature is get together your men, your carts, your spades, and your pick-axes, with a life-policy for 500 years, and see what you can accomplish. Much toil and tribulation will surely beset your road, but your reward will not be doubtful. You will, in that time, get fairly into the heart of your subject!

Cotemporaneously with August Gottlieb Richter flourished three distinguished men, each of whom may be regarded as a representative surgeon of his age and country; Antonio Scarpa, of Italy, born, June, 1747; Pierre Joseph Desault, of France, born, February, 1744; and Benjamin Bell, of Scotland, born. 1749. Behind these, like a pillar of fire, stands John Hunter, of England, surgeon, physiologist, and comparative anatomist, the most illustrious man of his day in the profession, born only fourteen years earlier than Richter. Of him, who was also, like Benjamin Bell, a Scotchman' but the credit of whose rearing justly belongs to England, it would not be proper to speak in detail in this connection; for he belongs essentially to himself, and therefore cannot be compared with other men, any more than Cæsar or Bonaparte. Deprived of the advantages of an early education, and having been apprenticed to a carpenter until he had nearly attained his majority, he literally commenced the study of medicine under great difficulties; yet, notwithstanding, his progress was remarkably rapid, and he soon attained to extraordinary eminence. His works, although disfigured by great blemishes of style, and replete with obscure passages, have become classical. They are valued by medical men more even now than formerly. They unfold the great doctrines of inflammation, of the adhesive process, of the pathology of the venereal disease, and of the treatment of gun-shot wounds, in a manner altogether unknown to his predecessors. It remained for him to throw new light upon every subject which he touched, and to perform for surgery what Lord Bacon has performed for science in general. If we were called upon to pronounce judgment upon John Hunter, as a man of genius, as an original observer, and as a real contributor to the knowledge of the profession, we should not hesitate to place him in the same rank as Hippocrates, Sydenham and Bichat, the most illustrious names in medicine that the world has yet produced, the

Homers, and the Bacons, and the Shakespeares of the profession, the true expounders and law-givers of medical science.

One of the most remarkable of Richter's cotemporaries was Antonio Scarpa, whose active professional career extended over half a century. He was of obscure origin, and was born, as already stated, in 1747, in the village of Motta, in Friuli. He studied medicine at the University of Padua, and gave early evidence of great taste for anatomy, which he prosecuted under the immediate supervision of the celebrated Morgagni. Such was his proficiency in this department that, at the age of twenty-two, he was appointed professor of anatomy in the University of Modena. After a residence there of seven years, during which he spent most of his leisure in dissections, and the investigation of the structure of the ear, the ganglions, and nervous plexuses, he visited England, France, and Germany. Returning, after an absence of two years, with increased zeal for his professional pursuits, he accepted the chair of anatomy in the University of Pavia, in which he continued until, at an advanced age, he was compelled to retire on account of the failure of his sight. During the last five years of his life he was afflicted with chronic disease of the kidney and bladder; but he spared no efforts to lighten his suffering by cultivating a cheerful disposition and a Christian resignation. At his country residence at Bosnasco, on the right bank of the Po, he found solace in the chase, agriculture, the contemplation of nature, the perusal of the ancient classics, and the study of the fine arts, of which he possessed one of the best private collections in Italy. It was here, too, that he had composed most of those remarkable works, which have served to give him an European and an American reputation. Scarpa died on the 30th of October, 1832, in the eighty-fifth year of his age, retaining to the last a good memory and a capacity for social enjoyment.

He was tall in his person, and remarkably graceful in his figure, with bland manners and a commanding presence. His voice was clear and animated, and he possessed a happy faculty of imparting knowledge. As a lecturer, he never failed to rivet the attention of his numerous pupils by his captivating and enchanting eloquence. He conversed fluently in several languages, but had a decided preference for the Latin over his native tongue. His industry was unbounded. Excepting Cuvier, there was probably, at that time, no scientific man in the world that was so incessantly and so laboriously occupied. He was a member of most of the learned societies in Europe. He was a foreign associate of the French Institute, having received a majority of votes over Sir Humphrey Davy. Napoleon, who knew so well how to appreciate and to reward merit, created him Knight of the Iron Crown, and subsequently member of the Legion of Honor, notwithstanding he had purposely absented himself when the professors of the University of Pavia threw themselves at the feet of the conqueror of Marengo.

Scarpa, like Richter, was a voluminous writer. For a while treatise followed upon treatise in rapid succession. He seemed to possess the faculty of a novelist in the ease and rapidity of his composition. Having collected his facts, he had no difficulty in arranging and combining them, so as to give them proper form and system. His earlier productions were principally of an anatomical character, and were profusely illustrated by steel engravings, executed in the highest possible style of the art by the masterly hand of Anderloni. Such was the mechanical splendor of these works, and the ability of their literary and scientific execution, that they attracted universal admiration. His descriptions and plates of the nerves of the heart established for him the reputation of the first anatomsit of the age. Prior to their publication, this organ, strange to say, had been declared by many dissectors to be destitute of nerves, and, consequently, also of sensibility, *stupitum et insensile viscus.* It need hardly be added, that the researches of Scarpa effectually dispelled this error. His treatise on the minute structure of the bones was another excellent performance, exciting much attention among anatomists, from the novelty of its views and its artistic beauty. Many years afterwards, a translation of it was published by Dr. John D. Godman, only a short time before the death of that distinguished and lamented anatomist, naturalist, and writer.

But the anatomical works of Scarpa, magnificent as they were in their execution, and honorable to the scientific character of Italy, sink altogether into insignificance in comparison with those which he wrote on surgery. The former were executed and published in the heyday of his early professional life, under the guidance of a youthful enthusiasm and a spirit of romance, which often urge on men, destined to become great, with an irresistible impulse, to the performance of deeds apparently far beyond their years; the latter, after he had attained to full maturity of judgment, and to the meridian of his professional splendor. Considering the limited extent of the theater of his observation, we are astonished at the result of Scarpa's surgical labors. The hospital over which he presided at Pavia, and in which he laid the foundation of his immortal works on surgery, never contained, it is said, more than twenty-five beds. While Desault had his thousands of cases at the Hotel-Dieu, in Paris, the Italian had hardly a few hundred; and yet, as will be seen by-and-by, there was a vast difference in the relative mental productiveness of the two. The truth is, Scarpa made the best use of his opportunities. What he observed, he observed well, and recorded with the hand of a master. The Frenchman had more than he could do; he saw much, but observed comparatively little; he recorded still less. Rokitansky boasts of having opened 30,000 bodies: has he dissected and examined them? If he has been engaged at the business thirty years, then it follows that one thousand cadavers have annually passed under his inspection, or nearly three a day, from one year's end to the other, during the whole of this long period. We are aware that the Viennese professor has assistants, and that thus much, if not all, of the drudgery of these post-mortemizations is taken off his hands; but, still, a vast amount of labor is left, which no one but the eminent necroscopist himself can perform. Would it not be better for the interests of pathological anatomy, and for Rokitansky himself, if he had fewer subjects and more time for examination? Has he not pronounced sentence upon himself, when he declares that the first edition of his work on pathological anatomy does not *suit* him, on account of its many imperfections, and its numerous hasty generalizations? A man who inspects a thousand bodies a year, or witnesses three thousand cases of disease annually, between the first day of every January and the last day of every December, reminds one forcibly of a traveler who boasts of having circumnavigated the globe, and viewed every object of interest in the known world, in six months. Observation requires time: no great problem, in any department of human knowledge, was every solved in haste.

As no one ever understood this principle better than Scarpa, so no one ever carried it out to more advantage. What he did, he did thoroughly. Like August Gottlieb Richter, he printed, not for time, but for eternity; not for Italy alone, but for the world. It was thus, and thus only, that he produced his works on surgery, every one of which is a master-piece of its kind. With a child-like simplicity, he contented himself with picking up pebbles on the sea-beach of Nature, which, as his materials accumulated, his plastic genius moulded into rocks of science. Rokitansky, on the contrary, suspends himself daily over his three cadavers, as the tourist sometimes suspends himself over the mouth of a crater, but takes good care not to let himself so far down as to come in contact with its mephitic vapors. The pathological anatomist must not soil his glove, or stain his vest with the blood of his subjects!

Scarpa, in the meridian of his life, was essentially a surgeon; indeed, all his feelings, inclinations, and pursuits were surgical. He had no fondness for medicine, and never practised it, except on occasions of great emergency. "Medicine," he observed to a friend "was a thing with which he did not like to meddle."

The most important surgical works of Scarpa, and those by which he will be best known by posterity, are his treatises on the eye, on club foot, on aneurism, on hernia, on the high operation for stone in the bladder, on scirrhus and cancer, on the ligature of the principal arteries, and on hydrocele of the spermatic cord. Nearly all of these works were promptly translated into the different languages of Europe, in which they at once became classical. That on the eye passed through four editions, in less than sixteen years, under the immediate supervision of its illustrious author, who enriched each as it appeared with valuable additions. Many copies of the English editions, both of this work, and of the treatises on hernia, aneurism, and club foot, have found their way into the public and private libraries of this country. During the latter period of his life, Scarpa wrote a small tract on the recto-vesical operation of lithotomy, which had the effect of involving him in a warm controversy with Vacca-Berlinghieri, the inventor of the operation, as well as with several French surgeons, who had become its advocates. Of the merits of this controversy nothing need be said here, beyond the fact that the operation which led to it has long since become obsolete, experience, the only true test of the value of any operation, having shown that it is not only more fatal, but much more liable to be followed by fistule, than any other procedure with which we are acquainted.

The value of Scarpa's labors in ophthalmic surgery has been generally acknowledged by the profession. In the first edition of his treatise on the subject, he described a new mode of forming artificial pupil, which has ever since borne his name. It simply consists, as is well known, in detaching, with a curved needle, the iris from its peripheral connections, to an extent sufficient to admit a sufficiency of light for the purpose of vision. Of the value of this operation various opinions have been expressed by ophthalmologists; but that it is great is undeniable, from the universality of its applicability where an artificial opening is required merely on account of partial opacity of the cornea, or occlusion of the natural pupil. Its chief disadvantages are, its liability to be followed by undue inflammation, in consequence of the laceration of the iris, and the diminution of the new opening from the contraction of its edges.

In regard to the ophthalmia of new-born infants, the nature and formation of staphyloma of the cornea, lacrymal fistule, and carcinoma of the eye, Scarpa introduced new and valuable observations, which can only be appreciated correctly by those who are familiar with the state of ophthalmic surgery at the commencement of the present century. He asserted, justly, as all experience has since proved, that, in fungus hematodes, complete extirpation of the eye, however early performed, is not only useless, but tends rather to accelerate the death of the patient.

In his treatise on hernia, Scarpa displays the accuracy of an accomplished anatomist with the learning and sagacity of a great surgeon. His anatomical prologues are master-pieces of their kind; and it would be difficult to find anything more clear than his account of the diagnosis and treatment of the various forms of the disease. The work was a great improvement upon that of Richter, published thirty years previously. Without limiting himself strictly to his own observations, which no writer of a monograph should ever do, if he desires to produce a useful and an able performance, the treatise is entitled to the rank of an original work, comprising the results of the author's large experience in this department of surgery, and affording many valuable suggestions in regard to the operative parts of the subject.

His treatise on aneurism still remains without a parallel in surgical literature. Founded mainly upon the results of his personal observations, it comprises a body of facts far in advance of every thing of the kind published before or since. Prior to his time, writers had divided aneurism into true, spurious, and mixed; a classification which he was the first to prove to be erroneous, his dissections having taught him that there is but one form of this disease, namely, that caused by the rupture of the proper coat of the artery, with effusion of blood into the surrounding cellular tissue. In the work in question, he details numerous experiments which he performed on the dead subject, to demonstrate the nature and extent of the collateral circulation after the application of the ligature to the principal arteries, and he lays down the most minute rules for operating on aneurism in the different regions of the body. Finally, he directs special attention to the subject of secondary hemorrhage, an occurrence so much and so justly dreaded by surgeons after operations for aneurism.

In his work on deformities of the limbs, Scarpa has given an admirable account of their anatomy, and of the most approved methods, then in vogue, of rectifying them. His shoe for the cure of club-foot is well known, and is much employed even at the present day. The principles on which it is constructed enter largely into all the apparatus for the relief of this deformity, devised since the brilliant operation of Stromeyer.

With the death of Scarpa may be dated the downfall of Italian surgery. Jean Baptiste Paletta, who marched side by side with him, was a worthy cotemporary, whose learning and skill and reputation were inferior only to those of the great Nestor himself; but where are his successors? Where are the great surgeons of modern Italy, the land of poetry, of the fine arts, and of the most beautiful language under the sun? Alas! echo answers, "Where?" The prestige alone of Scarpa's name remains. The Medical College of Rome has done nothing for the progress of Hippocratic medicine. The Universities of Modena and Pavia are no longer frequented by medical students.

Desault, the illustrious representative of French surgery in the latter part of the last century, while he possessed numerous traits of character in common with Richter, Scarpa, and Bell, yet differed from them all in several important particulars. He was a most accomplished practitioner, as well as a most expert operator; but he detested writing; and hence he never produced any literary effort worthy of his name. His cotemporaries, on the oontrary, delighted in composition, and all became distinguished authors: they wrote with rapidity, and in a style at once clear and elegant. It would be difficult to determine to which of them to award the palm in this respect. Desault had no love for the literature of his profession. Like John Hunter, he thought that medicine and surgery should be studied in hospitals, not in books, for which, with few exceptions, he expressed contempt. Richter and Scarpa and Bell, on the other hand, were well acquainted with the writings of the ancients and moderns; and they seemed to have set out, early in life, with a determination to add to the general stock. They seemed to prefer themselves to record their experience to delegating so important an office to others, who often execute it but imperfectly. They seemed to be grateful that there was a medical and surgical literature, reflecting, like the surface of a broad mirror, the progress and condition of these sciences in different ages and in different countries. They seemed not to wish that another Caliph Omar would arise, and burn up all the libraries that had been accumulating in the world since the bipliopolitan fire at Alexandria. Desault, on the contrary, would have applied the match, and cut the hose! In lecturing on practical anatomy, even at the very dawn of his brilliant career, he took special pains to declaim against the use of plates and wax-models, then so much in vogue; and he never hesitated to extend his denunciations also to books. Generally, indeed, he would devote one entire discourse to the subject. On such occasions, as he became animated with his topics, he would exclaim, "*Voyez, Messieurs, voyez beaucoup, voyez encore:* see, gentlemen, see frequently, see constantly; for, in this manner, you will engrave upon your minds plates more durable and more varied than any which art owes to the burin or the brush, and write in characters that will never be effaced a book which will not misrepresent nature." Here Desault was right; but, in applying his test to other branches of the art, he was wrong. The proper place for acquiring a knowledge of anatomy is in the dissecting-room; but what would the learner do if he had no books to guide him in chemistry, medicine, surgery, physiology, obstetrics, materia medica, and jurisprudence? Here, books *are* of use; and it would be very absurd to declaim against them, as calculated to convey false impressions. Dupuytren, who, early in the present century, succeeded to the post formerly occupied by Desault, equally despised books; and the results of his vast experience would probably have been lost to the world, if he had not had admiring and obliging pupils, who collected and systematized his observations. John Hunter, as before intimated, was of the same mode of thinking; but, strange to say, he left numerous works, composed with his own hand. When the father of Physick took his son to London, to study with Hunter, he asked the latter what books he should procure for him. Turning round, he pointed his attention to the subjects, the jars, and the dried preparations before him, adding, "These are the only books which the young gentleman will need while under my roof." It is well known that this great man hardly ever read a book. His opportunities for observation were great; and he preferred to interrogate nature to consulting the works of men. But a little reading might, nevertheless, not have hurt even Hunter: a knowledge of the literature of medicine might have rendered him more lenient, as well as more just, towards his predecessors and cotemporaries.

Desault possessed a fertile mind and an inventive genius. To these be added extraordinary mechanical talents; and hence it was that he did so much to perfect the mechanical processes of surgery in his day. He was a great inventor of apparatus, bandages, and dressings. His mind seems to have run riot upon this subject. None of his cotemporaries could approach him in this respect. He saw how clumsy and ill adapted were the various appliances of the art of surgery, and how much need there was of reform and improvement. He lost no time, and spared no pains, in meeting the emergency. The result was eminently propitious. His labors, in this department, constituted a new epoch in the history of the profession. Who is not familiar with Desault's bandage for fracure of the clavicle? with his splints for fracture of the thigh-bone? with his substitution of the straight for the curved knife in amputations? with his numerous improvements of the catheter, and, we had almost said, a hundred other inventions of a similar nature? His labors in this department of surgery bear a much closer resemblance to those of Physick than to those of any of his great cotemporaries whom we have named. Desault was, in truth, a matter-of-fact man; he derived much more enjoyment from the practical than from the speculative parts of his profession. He never originated a great doctrine. His favorite studies were anatomy and surgery, which he wooed as a lover wooes his mistress. He was a mere stripling when he began to teach anatomy. His amphitheater and dissecting-rooms were his daily resort for many years, even long after he had reached the zenith of his renown. He loved there to meet his pupils, and to display before them the structures of that being who is so "fearfully and so wonderfully made." Of surgical anatomy he was the creator, as his favorite and illustrious pupil, Xavier Bichat, was the creator of general anatomy.

As an operator, Desault was unrivalled in his day in France. No one ever knew better than he how to apply his immense knowledge of surgical anatomy to the guidance of his knife. It was Desault who remarked that the simplicity of an operation was the measure of its perfection; a sentiment which has since assumed the rank and dignity of a maxim.

In 1782, Desault was appointed surgeon-in-chief to La Charité. Prior to this period, he had occupied none but subordinate positions. He now entered a field, where he reasonably hoped to reap new glory. He had long wished for an opportunity to try, on a large scale, the various apparatus and processes which he had devised for the amelioration of surgical maladies and accidents. Such an opportunity was now afforded, and it may well be supposed that it was not neglected.

Six years after his appointment to La Charité, Desault was transferred to the Hôtel-Dieu, then, as now, one of the largest hospitals in the world. He had previously delivered lectures on clinical surgery, but he now perfected his arrangements, and established a school which soon acquired an European reputation, attracting pupils from all parts of England, Spain, Italy and

Germany. His private practice also greatly augmented; he enjoyed the full confidence of the public; he was, in short, the surgeon not only of Paris, but of France. He was now thirty-nine years of age, and rapidly approaching the meridian of his professional splendor. Still he relaxed none of his energies, but labored, if possible, with increased zeal. Although married, he slept for sometime every night at the Hotel-Dieu, in order that he might be able, at any moment, to afford his assistance in cases of emergency. Never before had any practitioner exhibited greater self-devotion to the public good. He had entirely lost sight of self.

Talents and industry may accomplish wonders. They had done everything for Desault, whose life in 1788 formed a most happy contrast with the life of Desault in 1764, when, at the age of twenty, he went from Befort, the seat of a small medical school, to Paris, attracted by the fame of Louis, Sabatier, Morand and other celebrated teachers and practitioners. Twenty years had achieved a vast difference between the two lives; his poverty had been replaced by wealth, his obscurity by greatness. His early education, in consequence of the limited means of his parents, had been in a measure neglected, and most of his life had been passed in doubt and perplexity. One friend alone was faithful to him during this trying period of his life; it was a mere *idea*, but an idea that never forsook him for a moment. Soon after his arrival in Paris, his money gave out, and he was obliged to depend, for sometime, upon the precarious subsistence derived from giving instruction in mathematics to some of his fellow-students. He was rejoiced, however, that he was now at the fountain-head of medical science, and that he had escaped from the provinces, where his first professional lessons had been received from the lips of a barber-surgeon, whose only knowledge consisted in mixing medicines, in bleeding, and in shaving. His birth place was Magny-Vernais, an insignificant village in Franche-Comté.

In contemplating this part of the career of Desault, we are constantly reminded of the early embarrassments of Boyer, Roux, Velpeau, and other great French surgeons, and of the patience, perseverance, and self-sacrifice, which they employed in surmounting them. His youth was spent in swaddling-bands, with a crust of bread for his food, and cold water for his drink.

It was the destiny of Desault to die younger than any of his illustrious cotemporaries. His death occurred on the 13th of June, 1795, before he had fully attained his fifty-first year. His last days were passed amid the agitating and bloody scenes of the French Revolution. On the 28th of May, 1793, without the slightest suspicion on his part, and while engaged in a clinical discourse at his amphi-theatre at the Hotel-Dieu, he was arrested by the police, and hurried off to the prison of the Luxembourg. As the news of this outrage spread, the public clamor became so great that the Committee of Safety was compelled almost immediately to recall him to his functions. Accordingly, after a detention of three days, spent in acts of kindness to his more unfortunate companions, he was as suddenly and unexpectedly restored to liberty, as he had been deprived of it. He immediately resumed his onerous duties at the Hôtel-Dieu as if nothing had happened. Soon after, the School of Health having replaced the Faculty of Medicine and the College of Surgery, he was named professor of Clinical Surgery, his private establishment at the Hospital being thus merged in the public. The new organization however, was exceedingly disagreeable to him; it deranged all his plans; he idolized surgery, and, like Scarpa, had never loved medicine. His chagrin, which he did not hesitate to express openly, preyed visibly on his mind; he became sad, and his melancholy increased with the frightful events that were passing before him. Desault was an altered man. His health was impaired, and his friends felt alarmed for his safety. It was at this juncture that he was summoned to the son of Louis XVI., sick at the prison of the Temple. While thus occupied in bestowing the most assiduous attentions upon the young prince, that unfortunate victim of political despotism and crime, he was suddenly seized with ataxic fever, terminating his life in less than three days. The event created the most painful sensation throughout Paris, especially among the many pupils of Desault, whom they had loved and venerated as a father. At his funeral, says one of his biographers, from whom some of these facts are derived, flowers were strewn upon his tomb, and the following verses were inscribed beneath his bust:

Portes du temple de mémoire,
Ouvrez-vous, il l'a mérité.
Il vêcut assez pour sa gloire,
Et trop peu pour l'humanité.

Desault had nobly realized the *idea* which had haunted him in early life, that monitor of the soul in his poverty and his struggles; and it was, perhaps, fortunate for him that he died at this crisis in the French revolution. Had he been spared longer, he might have shared the fate of Lavoisier and some of the other great men of science of that horrible epoch. For a while, rumors were current in the capital that he had been poisoned, and the report seemed to derive plausibility from the circumstance that the surgeon who succeeded him as attendant on the Dauphin, also died suddenly, within a few days after his first visit; but this suspicion was completely disproved by the results of the examination of the body.

It has been said of this remarkable man that he was of an unhappy temperament, with occasional outbreaks of irritability, and that he never completely overcame the defects of his early education. A certain brusquerie was always perceptible in his manners. His pupils were in the habit of calling him "*bourra bienfaisant*," the good natured old cur. He detested fashionable society, and rarely honored it with his presence. His aversion to the Academy of Surgery, of which he was early elected a member, seems to have been equally invincible. Upon being reproached by some of his pupils for not attending the sittings of this illustrious body, he pleasantly replied: "*Je suis comme les substances salines; je ne crystallise qu'en repos.*" Another peculiarity in his character was a dislike to consultations. On such occasions his timidity and embarrassments were extreme. He would express his views of the case fully and deliberately; but if he happened to be contradicted, he immediately dropped his head, and said nothing more. He had but one opinion. When he began life as a teacher, he lectured with difficulty, on account of some hesitancy in his speech; but as he grew older, this gradually left him, and he became not only fluent, but even eloquent.

Soon after his appointment to the Hotel-Dieu, Desault instituted the "Parisian Chirurgical Journal," the only literary enterprise in which he was ever engaged. To the pages of this periodical, which was intended to reflect the surgical practice of the Hotel-Dieu, the great surgeon contributed absolutely nothing with his own pen. The work was edited, under his immediate supervision, by several of his pupils, and was discontinued after it had reached its fourth volume. A London surgeon has honored it with an English translation.

After the death of Desault, two volumes, purporting to be an account of his doctrines and practice, were published by Bichat. Of the genuiness of these volumes, no one can entertain any doubt, who is acquainted with the life and character of Bichat, with his admiration for Desault, and with the opportunities which he enjoyed of witnessing his practice. Although the work is nothing but the outline of a great picture, it formed unquestionably a highly valuable contribution to the surgical science of the present century The first volume passes in rapid review the surgical accidents and maladies of the neck, trunk, and extremities, while the second is taken up entirely with the consideration of the diseases of the urinary organs, to the pathology and treatment of which this mighty master had, for years, devoted much attention. The reader, familiar with the medical literature of this country, is aware that a translation of these volumes, under the title of the "Surgical Works of Desault," was published at Philadelphia, in 1814, by Professor Edward Darnell Smith, of South Carolina.

The same illustrious editor, who appears to have entertained the same admiration for his master that Boswell entertained for Johnson, without any of his weaknesses and follies, published, soon after the death of Desault, the treatise of the latter on fractures, luxations, and other affections of the bones. The work abounds in original facts and observations, and may be regarded as one of the most important legacies which the close of the eighteenth century, so fertile in discoveries and improvements, bequeathed to the commencement of the nineteenth. It is, in fact, a record of the numerous cases of the accidents and diseases which passed under the eye of this extraordinary man at La Charité and the Hotel-Dieu, and of the many improvements which he effected in their treatment, by the invention and application of the apparatus, bandages, and various kinds of dressings, associated with the name and fame of Desault. A translation of this treatise, comprised in one octavo volume, appeared at Philadelphia, in 1805, from the pen of a man who, then a mere youth, was himself destined to become eminent, and to play an important part, for half a century, in American medicine. We allude to the late Dr. Charles Caldwell. We give from the preface of this translation one extract, which no one who knew the style of the translator will regard otherwise than as characteristic. It is eminently *Caldwellian:*

"Should any one open this volume in quest of the flowers of fancy, or the embellishments of style, he will close it again without being gratified. Ambitious only of communicating new and useful matter, and too intent on things to be in any measure choice of his words, the celebrated original was regardless, perhaps to a fault, of the ornaments of diction. Rich in the resources of a capacious and exalted intellect, he poured forth his knowledge like precious ore from the mine, leaving to others of inferior capacities the humbler task of refining and polishing it."

All this is very pretty: but, when it is recollected that the "celebrated original" had nothing whatever to do with the composition of the treatise which bears his name, but that this task was performed exclusively by Bichat, after the death of Desault, it is difficult to discover its applicability. Nor is it easy to perceive, as the translator seems to have done, why a treatise should be embellished with the "flowers of fancy," or the ornaments of rhetoric. Fancy and rhetoric are one thing; truth and science another. The latter are, like beauty, "when unadorned, adorned the most."

It is rarely that two men of the same name, living at the same time, and dwelling in the same place, receive proper justice at the hands of their contemporaries, or always even from posterity. The one is almost always sure to exalt himself at the expense of the other. The lever by which this is usually accomplished is trickery, or, as it is called at the present day, the art of puffing; which, with many, is as much a divine gift as the art of poetry. By the steady employment of this art, Tom Jones succeeds in dazzling the public; he is a handsome looking fellow, possesses fine colloquial powers, courts everybody, and soon becomes a great favorite. He praises himself constantly in the news-papers, talks largely of his practice and of his wonderful cures, delivers lectures to admiring students, and spends much of his time in criticising the conduct and the labors and the works of his cotemporaries. He is bold, dashing, unscrupulous: he has an object in view; and, to accomplish it, he does not hesitate, if necessary, to sacrifice his best friend. John Jones, on the contrary, being a very quiet and unobtrusive man, is content to pursue the even tenor of his way. He has never been idle a day since he entered the profession; he has toiled hard and manfully in its service; he has grown hoary in its cause, and still he works on, as if he were the youngest man in it. He has enjoyed an extensive practice, has performed many brilliant operations, and added many useful contributions to scienentific medicine. Everybody acknowledges his worth, except noisy and swaggering Tom, who discerns in him many faults, many sins, both of omission and commission, which he loses no opportunity to expose and to attack. What is so frequently and so openly repeated must be true; or, whether true or not, is very apt to be believed. John Jones is a doomed man; the prop is removed from beneath his feet, and down he goes, just as rapidly as Tom, inflated with gas, goes up. His arts have succeded, but only for a time. Truth is mighty; and, although she may slumber for a while, she is sure to prevail in the end. The position of Tom Jones is reversed; he has been weighed in the balance, and found wanting. True merit requires no meretricious aids; its rewards, though often tardy, are always sure.

Reflections such as these inevitably crowd upon the mind of one who is familiar with the history of the career of the two Edinburgh surgeons, Benjamin and John Bell. When the latter came upon the stage, at the close of the last century, the former had attained the height of his brilliant reputation. His surgical writings had reached the remotest corners of the civilized world; and the name of their author was everywhere, at home and abroad, a house-hold word with the profession. The verdict had gone forth in favor of his surgical pre-eminence; Germany and France had honored his works with translations; and an abridgment of his system of surgery, in seven octavo volumes, had been published in America, under the supervision of the surgeon of the "Father of his Country." Benjamin Bell, in fact, held the same position in the professional world as Richter and Scarpa and Desault. Most of his treatises were composed within the compass of fifteen years, before he had attained the fiftieth year of his age. Much of what he wrote, he wrote on the testimony of his own knowledge, derived from an extensive experience, both private and public, and from an extensive acquaintance with men and books. He had held, for more than a quarter of a century, the honorable post of surgeon to the Edinburgh Royal Infirmary, so prolific in all kinds of surgical accidents and diseases, and so renowned, in our day, as the nursery of Liston, Ferguson, Syme, Miller, and other great operators, writers, and teachers. He had been a close observer, and his works everywhere attest the good use which he made of his clinical investigations. We do not think that the profession either of Great Britain or of the United States have, at this day, the slightest conception of the debt which they owe to Benjamin Bell. By common consent, almost, they have agreed to ignore the claims upon their gratitude of one of the greatest, ablest, most learned, and most philosophical surgeons that Scotland has ever produced. The unmerited neglect into which he has fallen is easily explained: Benjamin Bell had his Tom Jones! A youth, a mere stripling of scarcely thirty years of age, by his swaggering and noisy pretensions, robbed him of his fame, and threw him in the shade. He bearded the lion in his own den, sneered openly at his practice, and loudly denounced his doctrines and his works. What John Bell left unfinished was completed afterwards by his brother, Sir Charles, hardly less illustrious as a surgeon than as an anatomist and a physiologist. Thus, by design at first, and subsequently by a singular combination of circumstances, was brought about the result in question.

If we regard these two men merely as men of genius, John was undoubtedly by far the greater of the two; but when we come to examine into their real merits, the solid and substantial parts of their character, our decision must be reversed. John was a bold, dashing, unscrupulous operator, fond of the applause of the vulgar, both in and out of the profession, a man who must do everything for effect, no matter how trifling or insignificant; a brilliant but unreliable writer, full of the keenest wit, and the most withering sarcasm; a ready, graceful, eloquent teacher, in whose presence the attention of the dullest pupil never flagged for a moment. His work on surgery, given to the world at the commencement of the present century, is the most fascinating treatise that has ever appeared on the subject in any age, in any language, or in any country. It is written in the style, and even much in the spirit, of a romance. The long exploded and the most grotesque doctrines and practices are disentombed, and placed in life-like forms before the reader, for no other purpose, apparently, than to excite his risibility. The most common topics are clothed in language of Oriental grandeur and magnificence, more befitting the pages of Rasselas or Lallah Rookh than those of a work on the exact sciences, where every word should be so carefully selected as to convey none but its technical meaning. His desire to be witty and sarcastic often betrays him into the most unpardonable mistakes and exaggerations. As a specimen of the latter, we need refer only to his account of one of his own operations, drawn up in a style that would have done honor to the merits of Don Quixote. The patient is a poor leech-catcher, who, in stepping out of a boat, had the misfortune to pierce, with the long and pointed scissors used in his business, "his hip exactly over the place of the *sciatic notch,* where the great sciatic artery comes out from the pelvis." A *prodigious* aneurism was the consequence, demanding interference with the knife. "Upon opening the tumor fully," says this knight of the scalpel, "with an incision eight inches long, and turning out the great clots, the blood was thrown out with a whistling noise, and with such impetus that the assistants were covered with it, and in a moment twenty hands were about the tumor, and, although the bag was filled with sponges and cloths of all kinds, they were insufficient to arrest the bleeding. Seeing, in this critical moment, that if he was to be saved it was to be only by a sudden stroke, I ran the bistoury upwards and downwards, and at once made my incision *two feet in length!*" To give still farther effect to this story, the redoubtable surgeon should have added that the poor leech-catcher's blood formed a pool six inches deep upon the floor of the operating-room, and that several of his assistants came within a hair's breadth of being drowned.

It is not to be wondered at that John Bell should have inculcated, in his Principles of Surgery, and some of his other writings, modes of practice that were utterly at variance with sound knowledge; but it is surprising that he could not have done this always without lugging in the name of his distinguished and generally more accurate cotemporary. He is particularly severe on Benjamin Bell for his notions respecting the treatment of wounds of the intestines. After having asserted that, if there be in all surgery a work of supererogation, it is the sewing up of a wounded bowel, and after having quoted a passage from the writings of his cotemporary inculcating the very antipodal practice, even in regard to the smallest openings of this kind, he breaks forth in the following style: "These things cannot be left unsettled without danger; they cannot be explained, without explaining and repeating, also, where-ever it is required, the opinions of authors; and again it is impossible to explain these things, without allowing such expressions to escape as are often more dangerous to the man who uses them than to the man who suffers them, and which no generous mind can think of using without regret. Yet, what shall we say of a man who adventures to write on a learned profession, while he himself is totally ignorant; who writes boldly through the whole circle of the human body; of wounds which he has never seen, and of viscera which he has never handled; who supplies his knowledge by bold conjectures only," &c. The man who is thus ranting and working himself into a towering passion lived long enough to have the mortification to find that his *assumptions* were erroneous, and the *conjectures*, as he called them, of his neighbor entirely true, as was incontestibly proved by the beautiful experiments of Smith and Travers, performed early in the present century. It is, in truth, not too much to say of the writings of John Bell, anatomical as well as surgical, that, while they abound in the grossest errors in matters of fact, they are utterly unfit to be put into the hands of the young men of the profession, whose minds, often attracted more by the specious than the useful, the ornate than the substantial, are sure to be bewildered and misled by the gorgeous style, the many episodes, the remarkable oddities, and the numerous vagaries of this once popular author. Such productions may be proper for the youth who spends his time in idle dalliance, in amusing himself in playing at bopeep with his profession; but they will never do for those who wish to learn anatomy and surgery as they are, and fit themselves for the active duties of the healing art. It is to be regretted that the author of the Principles of Surgery had not turned his pen in another direction, and endeavored to acquire fame as a novelist. His travels in Italy, where he spent the last few years of his life, in quest of health, show, as well as his other works, how well he might have succeeded in this department of literature. Scotland might have had another Great Unknown, another Wizzard of the North!

It cannot be denied that Benjamin Bell was free from faults as a writer; but if we judge him according to the standard of his age, we shall find comparatively little to condemn in him. He affected no impossibilities. He accomplished what he aimed to accomplish. His system of surgery is a model for the clearness of its style, the simplicity of its arrangements, and the systematic distribution of its subjects. The work does not comprise one ambiguous sentence, one superfluous paragraph. Considering the period at which it appeared, it must be regarded as a gigantic performance, eminently creditable to the science and literature, not only of Scotland, but also of Europe. A work in seven good-sized octavo volumes would never, if it had not possessed extraordinary merit, been translated into the two most distinguished languages of Europe, or re-published, in an abridged form, in this country. These facts attest, in the strongest terms, the estimation in which it was held by medical men. In Scotland, long before the last volume had left the press, the earlier ones had passed through three editions, showing the appreciation placed upon it by Mr. Bell's own immediate countrymen. His monographs on ulcers, on hydrocele, and on the venereal disease, in the latter of which the author, for the first time in Great Britain, strenuously advocates the pleurality of the venereal poison, are absolutely models of composition. Even now, although more than sixty years have elapsed since their publication, there are few men who can rise from their perusal without being materially benefitted. In expressing this high estimate of Benjamin Bell, as a writer on surgery, we wish not to be misapprehended. Excepting John Hunter, and him alone, there was not, in this respect, his equal in Great Britain, and out of Great Britain two men only—August Gottlieb Richter and Antonio Scarpa. Since the days of Wiseman such able works as Benjamin Bell's had not appeared in any part of the British dominions.

Benjamin Bell was never associated with any medical school, and, consequently, his works never enjoyed any of the prestige arising from such an association. He had not even been, like his hotheaded, conceited, and ill-natured cotemporary, a private lecturer.

Monro the Third and Russell, if we are correctly informed, had possession of the surgical professorships in the University of Edinburgh, and Bell died too young to succeed either of them. Russell lived long enough to become obsolete, and to sell, like an auctioneer, his chair to the highest bidder. Monro, too, hung on to his chair until he had worn out his reputation, the good feeling of his colleagues, and the patience of the trustees of that celebrated institution. Bell might, and no doubt would, have filled their places with great credit and increased lustre, for he possessed all the erudition and ability requisite for such an incumbency; but he was never honored with the appointment, and died without having worn a professor's gown.

Of his dexterity as an operator, no reliable information has reached us. That it was sufficient, however, to excite the jealousy of his neighbors is unquestionable, and no other evidence than this is required to convince us of its excellence. Dumfries had the honor of giving birth to this remarkable man. He was born in 1749, seven years after Richter, and died at Edinburgh in 1806, aged fifty-six years.

In disentoombing the claims of August Gottlieb Richter and of his illustrious cotemporaries, and placing them thus conspicuously before the profession of this country, we should be doing injustice to them and to ourselves, if we omitted to mention here the name of Heinrich Callisen, the great surgeon of Denmark, one of the representive men of his age and country. He was the *aurora borealis*, the Northern light, of surgery at the epoch under consideration. He flourished on sea and on land—for he was both a naval and a military surgeon—in the professor's chair, and in the closet of the student. His great work, *Institutiones Chirurgiæ Hodiernæ*, appeared in Copenhagen in 1777, and was received with applause by all Europe. It established his reputation as one of the most able and enlightened surgeons of the eighteenth century. Restricted to the consideration of the great principles of surgery, it is, as far as it goes, the most learned, comprehensive, and philosophical treatise on the subject that has ever appeared. It is a mighty fragment of a gigantic rock which the author's leisure never permitted him to expose to the gaze of his professional brethren. Had the whole structure been completed with the amplitude in which it was projected, it would have formed a work more massive than that of Cuvier on the natural sciences. But there are limits to the human mind, which nature, jealous of her prerogatives, does not often permit man to overstep. If Callisen had lived a century longer, he could not have added one iota more to his fame. The crown of his glory was full. This great man was born at Pentz, in Holstein, and died at Copenhagen, February, 1824, at the age of 84 years.

The space to which we are restricted will not permit us to enter into any further details respecting the life and services of Callisen. At some future period, we hope to resume the subject, and perform the agreeable task of paying an appropriate tribute to his memory. The career of such a man is full of interest to the medical profession of every country.

We look in vain, at this period, to the other States of Europe for renowned surgeons, or any great advances in surgical science and literature. Russia had not then, nor has she since, produced a single man of any distinction in this department of the curative art. No work on surgery, worthy of the name, has yet emanated from the press of that country; nor has she, so far as we are informed, furnished one great operator. Æsculapius has few temples in Russia. The medical school and hospital at Moscow have produced several skillful surgeons; among others, a few able lithotomists; and, once, Poland had a medical literature; but its medical glory seems to have departed with its political freedom. Sweeden and Norway and Hungary have accomplished nothing for the progress of surgery. Spain, the land of Isabella and Cervantes, has brought no trophies. The only surgical contribution, of a useful and creditable character, which she has sent to the Industrial Exhibition of the World, during the last sixty-five years, was a little ligament, bearing the name of Gimbernat, the principal surgeon of Madrid, in the latter part of the eighteenth century!

And where was America at this epoch of the world's history? Just emerging from the battle-field, where she had been fighting freedom's cause, breaking the tyrant's rod, and throwing off the oppressor's yoke; her garments still stained with the blood of her enemy; her very bones and sinews and fibres torn in shreds; taking a long, long breath after the heat of the day, preparatory to another and a still mightier struggle, the pursuits of government, of agriculture, of literature, of the arts, and of the sciences. In surgery she had already produced a Morgan, a Shippen, and a Jones; then followed a Physick, then a Dorsey, and then that mighty host, many of whom, thanks be to God, still survive to tell their own story, and to add one more jewel to the diadem of a nation's glory. S. D. G.

ART. III.—*The Organic Diseases and Functional Disorders of the Stomach.* By GEORGE BUDD, M. D. Blanchard & Lea, Philadelphia, and S. S. & W. Wood, New York.

THE appearance of a book upon the diseases of the stomach from the pen of Dr. Budd, who has been so favorably known to the profession for several years past by his admirable work on diseases of the liver, will be hailed with much pleasure by those who desire to learn all that is positively known concerning the subjects of which it treats. That the profession needs such information, and much more, no one can deny; but owing to the extreme difficulties peculiar to the study of diseases of the stomach, many are too apt to look with a distrustful eye upon every attempt to overcome these obstacles, and are content to continue in a state of blissful ignorance, which they calmly imagine to be the best evidence of their superior wisdom. And yet how many practitioners there are, who, aspiring to no higher knowledge of the functions of the stomach than the popular belief that it is the hopper of the animal mill, or the bread-basket of the community of organs which compose the physical body, are ever ready to charge it, or its kinsman, the liver, with nearly all the sins which they are unable to lay at any other door, and consider themselves called upon to attack it with emetics from within, and blisters from without; to torture it with food against which it rebels; to withold what it most strongly craves; to excite it with stimulants, when it is already irritated by disease; to dry up its juices with astringents, when moisture is what it most needs; to neutralize its acids by chalk and soda, instead of a judiciously selected aliment; and, still more commonly, reasoning from the unknown to the unknown—if reason it may be called—to sprinkle upon its unprotected surface the favorite pulv. hydrarg. sub-mur., hoping thus, as it were by some magic influence that this metal may probably have received from the heathen god for whom it was named, to subdue the foe, or drive him to some other quarter.

The work of Dr. Budd is strictly pathological and therapeutical, and consists of sixteen lectures, which, although herotofore given to the public through one of the medical periodicals of London, are here for the first time collected and arranged in an attractive volume of two-hundred and fifty pages.

The first two lectures are mainly devoted to the consideration of the action of the gastric juice upon the walls of the stomach after death, denominated 'Self-digestion of the Stomach,' and the circumstances that favor, retard, and prevent this process. That the gastric juice, independent of its relation with the living body, has the power, when placed under favorable conditions, of dissolving animal tissues, is a fact that has long been established; but it was reserved for Mr. John Hunter, in the latter part of the last century, to point out the not infrequent manifestation of this power after death, in the destruction, not only of the mucous membrane, but the other structures which compose the walls of the stomach, and even, to a greater or less extent, the organs immediately adjacent. This discovery, although inaugurated at the time among the achievements that gave brilliant lustre to the fame of this remarkable man, soon, however, lost its interest with the profession, and was hardly again thought of until the year 1830, when Mr. Carswell, being then in Paris, demonstrated the fact to a few French savans, much to their delight and surprise. "From this time, says Dr. Budd, the renewed interest had its former effect, and, for a few years essays on the subject frequently appeared. But pathologists, in general, seem not to be aware how frequently the stomach undergoes this change. It has been supposed by many to occur only after violent deaths; and when occurring, as it often does in other circumstances, it has been either overlooked or has been regarded as the effect of disease."

No one seems to have observed this change so frequently as Hunter, who was first led to the discovery of its real nature by finding it in an extreme degree in some persons killed by accident in the midst of health, in whom, therefore, it could not be explained as the result of disease. He says:

> "The first time that I had occasion to observe this appearance in such as died of violence, and suddenly, and in whom, therefore, I could not easily suppose it to be the effect of disease, was in a man who had his skull fractured, and was killed outright by one blow of a poker. Just before this accident, he had been in perfect health, and had taken a hearty supper of cold meat, cheese, bread, and ale. Upon opening the abdomen, I found that the stomach, though it still contained a good deal, was dissolved at its great end, and a considerable part of its contents lay loose in the general cavity of the belly."
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> "In some cases that fell under the observation of Hunter, the digestive action had extended much further than through the stomach. After having dissolved the stomach at the usual place, it had partly dissolved the adjacent side of the spleen, and had dissolved the adjacent portion of the diaphragm quite through, so that the contents of the stomach were found in the cavity of the chest, and had even corroded in a slight degree, the surface of the lung at that part."

The author, after referring to other of these extreme cases in which the whole thickness of the walls of the stomach, and even the adjacent organs were destroyed after death by the solvent power of the gastric juice, describes the appearance of the parts when only the mucous membrane is implicated, and refers to this circumstance the different kinds of softening described by Cruveilhier and Louis as the result of disease. It is really a remarkable fact, although Doctor Budd does not treat it as such, that, notwithstanding the world-wide reputation of Mr. John Hunter, and the interest that this discovery of the self-digestion of the stomach excited at the time, verified as it was by his own experiments and those of the celebrated Spallanzani, and the repeated observations of others, living only across the English Channel, two such men as MM. Cruveilhier and Louis, should be found who were as ignorant of the fact, as if it had occurred in the interior of the United States (which to both English and French physicians seems to be the Ethiopia of medical science).

> "As digestion of the stomach after death does not occur in all cases, and as, when it does take place, it occurs in very different degrees in different cases, the question arises—On what conditions does this digestion depend?
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> Two conditions, obviously necessary are—first, that the stomach, at the time of death, should contain a certain quantity of active

gastric juice, or, at least, of muriatic or lactic acid, which make with the coats of the stomach a digestive mixture; and secondly, that the stomach should be kept, for some hours after death, at the temperature required for artificial digestion."

The first of these conditions is found in persons who die suddenly by accident, and, more especially, soon after eating; but it also occurs, in a less degree, in those who die of disease, when the substances taken just before death are not of such a nature as to neutralize the gastric juice, such as ammonia, alcohol, potassa, &c. Dr. Budd cites cases in which the same result followed death from phthisis, as from sudden causes such as those already mentioned; and accounts for them by a reference to the thinness of the walls and the emptiness of the cavity of the stomach, and the presence of a small quantity of gastric juice, the secretion of which had probably been excited, just before death, through the sympathy of the organ with the diseased lungs.

The portion of the stomach in which this peculiar softening is most apt to occur is the great end, in consequence of the gravitation of the gastric juice in this direction when the body is supine; but it may take place in any situation, and is very often seen along the free edges of the folds of mucous membrane that form along the greater curvature of the organ in the neighborhood of the pyloric extremity. All other things being equal, it is stated to be much more common in very young children than in any other class of subjects, owing to the active secretion of gastric juice that in them is almost constantly going on, and the state of emptiness in which the stomach is usually found at death.

The condition in regard to temperature being nearly as essential as the presence of gastric juice, self-digestion is likely to occur much more frequently in summer, or, when the body is kept in a warm room, than in winter, when the body is exposed to the air.

In the third, fourth, and fifth lectures, the author treats of "Congestion and Inflammation of the Mucous Membrane of the Stomach," subjects replete with interest both to the student of pathology and the practitioner of medicine.

Congestion of the mucous membrane of the stomach is divided into two parts: first, simple turgescence of the vessels of the organ, resulting from mechanical obstruction to the venous circulation; and, second, active plethora dependent upon an unnatural condition of the blood. The former may arise from a variety of causes, such as strangulation, convulsive muscular contraction as in epilepsy, organic disease of the heart, and cirrhosis of the liver. Produced by any one of these causes, a marked characteristic of this passive congestion is hemorrhage from the free surface of the mucous membrane, especially if the interruption to the venous return be sudden; for it has been observed that when the obstruction is gradually brought about, instead of an oozing of blood from the free surface of the mucous membrane, a transudation of serum takes place through the walls of the organ into the peritoneal cavity. Another result of passive congestion, dependent, more or less, upon an impediment, such as cirrhosis of the liver or organic disease of the heart, is impaired nutrition of the organ and consequent diminished power of resistance—a fact which strongly contra-indicates the use of stimulating food or drink in these diseases.

Plethora of the mucous membrane of the stomach is observed in cholera, yellow fever, suppression of the biliary secretion from obstruction in the common gall duct, and suppression of the menses. The occurrence of hemorrhage in these cases is as common as it is under the former condition; but the necessity of distinguishing between the two is very obvious.

As employed by Dr. Budd, "the term inflammation is generic; and, in the latitude now given to it, comprehends processes which although they have many points in common, differ in very important particulars." After stating the peculiar difficulties attending the study of inflammation of the mucous membrane of the stomach, and acknowledging that our knowledge upon this subject is extremely vague, he proceeds to describe the different varieties by connecting them with the causes by which they are excited. One of the simplest and most frequent of these varieties is that brought on by excess in eating or drinking, as proved by the experiments of our countryman, the late Dr. Beaumont, from whose observations Dr. Budd makes numerous quotations in the course of his work.

The stomach may also be inflamed by alcoholic drinks, as was likewise demonstrated upon Alexis St. Martin by Dr. Beaumont.

"The effect," says our author, "which ardent spirits have on the stomach, depends greatly on their state of dilution. The more they are diluted, the less apt are they to irritate or inflame the stomach. It has long been known that *spirit*-drinkers are the especial victims of cirrhosis, which has, in consequence, been called "the gin-drinker's liver;" and it has been very generally supposed that distilled or ardent spirits hurt the stomach more than fermented liquors, even when the spirits are diluted with water so as to be of the same strength. But in wine and malt liquors, the alcohol exists in a state of mere admixture with their other constituents, and there can be but little doubt, therefore, that the more injurious effects of ardent spirits depend mainly on the circumstance that the victims of spirit-drinking, not only drink large quantities of spirits, but often drink them "neat," (or as we Americans would say, "straight,"*) and on an empty stomach. Produced by either eating indigestible food, or drinking spirituous liquors, nothing is more striking, in the observations of Dr. Beaumont, than the rapidity with which the stomach recovered under the influence of cooling drinks and low diet."

Higher degrees of inflammation are brought on by more powerful mechanical and chemical irritants, numerous instances of which are cited by the author, some of them exceedingly interesting, both on account of the singularity of the causes and the ultimate results of the cases. The case of the sailor that swallowed fourteen clasp knives, and lived three or four years afterward, is of course brought forward, as well as the man who, at the burning of the Eddystone light-house, had seven or eight ounces of molten lead to run down his throat into the stomach, and survived the accident twelve days. But the point that the author calls most attention to, in connection with these cases, is the slight amount of constitutional disturbance excited by the most intense degree of inflammatory action in the stomach. In experiments performed by Dr. Spry, by pouring boiling water and molten lead into the stomachs of dogs, the animals, within a day or two after the operation, seemed to have regained their usual spirits and appetite; and yet, upon being killed, their stomachs were found to be in a state of active gangrene.

Inflammation of the stomach may also be produced by prolonged abstinence, as proved by the experiments of Andral and

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* Reviewer.

Gavarret; and "the irreparable injury to the health, caused by long continuance on a diet deficient in some of the principles requisite for nutrition, is also well shown in the curious and painful history of Dr. Stark," the interesting details of whose fatal experiments upon himself, Dr. Budd gives at length.

Still another way in which gastric inflammation may be induced, is by the presence of some noxious matter in the blood, as is well seen in poisoning by arsenic in cases where this mineral is introduced into the system through some other channel than the stomach. Another instance of the same, cited by our author, is the frequent occurrence of inflammation of the stomach as a consequence of the gouty diathesis.

The treatment of inflammation of the stomach recommended by Dr. Budd is remarkable for its simplicity, and we are not at liberty to deny its efficacy. It certainly contrasts strongly with the more decidedly therapeutical practice commonly in vogue in such cases. We quote his remarks, not as a sample of his best style of writing, but of his great dependence upon the recuperative powers of the stomach under a judiciously selected diet:

> "In the treatment of inflammation of the mucous membrane of the stomach, the fundamental point is to give the stomach sufficient intervals of rest, and to avoid irritating it by physic or food. For inflammation brought on by alcoholic drinks or by undigested or irritating food, nothing more is generally necessary than cooling drinks and restriction for a few days to a sparing diet. consisting of light broths, farinaceous substances, and milk. If the inflammation be very severe, causing much pain and tenderness, with a sense of heat at the stomach and frequent vomiting on the contact of food, leeches may be applied to the epigastrium; the stomach may be cooled, and its irritability much lessened, by sipping from time to time iced water, or by holding pieces of ice in the mouth, and swallowing the water as the ice dissolves; and the diet may be still further restricted. Broths may be interdicted, and, for a few days, nothing more be allowed than the simplest drinks and those farinaceous substances that are principally composed of starch. In active inflammation of the entire stomach, or when, from any cause, the digestive power is very feeble, there is usually dislike of animal food, and, by a natural instinct, arrow-root, gruel, &c., are substituted for it. Even farinaceous substances, when they contain much gluten, are found to be heavy and oppressive. The peculiar business of the

stomach is to dissolve the albuminous constituents of the food. The gastric juice has comparatively little action on the starch, which, consequently, taxes the stomach less, most probably passes out of the stomach more quickly, and is certainly found. when the digestive power is suspended, to be less oppressive to it. As I have before observed, the restoration of the stomach to its healty condition is greatly promoted by the active nutrition of its lining membrane."

In the sixth and seventh lectures is an interesting account of "Perforating Ulcer of the Stomach;" the large space devoted to which, although apparently out of proportion to the comparative infrequency of the disease, is fully justified by the very satisfactory manner in which the subject is discussed. Indeed, in addition to much pathological information, here for the first time arranged in a clear and logical connection, the author furnishes us such an array of diagnostic evidence that the practitioner of medicine commits a culpable error, if he fails, in a majority of cases at least, to discover the presence of this insidious enemy, and to employ those means which shall place his patient in the best posture for defense.

The eighth lecture treats of "Cancer of the Stomach," and contains a brief outline of all that is positively known about this not uncommon, but incurable malady. The reader may not be aware of the fact, but it is nevertheless probably true, as stated by Dr. Walshe, that, in Europe at least, cancer more frequently originates in the stomach than in any other tissue or organ of the body, the uterus only excepted. Thus, "out of 9118 cases of death from cancer, recorded in the Mortuary Registers of Paris, from 1830 to 1840, M. Touchon found that the disease was seated in the uterus in 2996 cases; in the stomach, in 2303; and in the breast, in 1147; or, taking the proportionate round numbers, in the uterus, in about one-third of the cases; in the stomach, in about one-fourth; and in the breast, in about one-eighth."

Having thus passed in review the organic diseases of the stomach, the author proceeds to consider its far more frequent functional disorders, to which the eight remaining lectures are entirely devoted.

Of this large class of diseases, the first group discussed is entitled "Sympathetic Disorders of the Stomach from Irritation elsewhere." The number of these disorders, owing to the well known extensive sympathy of the stomach, almost entitle them to the name of legion; but only the more common are here alluded to, such, for instance, as the gastric irritability which so frequently occurs in the last stage of phthisis, in abscess of the liver, in the passage of gall stones, in the early stage of inflammation of the brain, especially of children, and, more frequently still, in organic disease of the uterus. Upon the important signification of the complication with these diseases, both in a diagnostic and therapeutic point of view, the author has much to say that is practically interesting.

Another and very common functional derangement of the stomach is "slow and imperfect digestion, dependent upon a deficient secretion of gastric juice."

> "It has been clearly shown by the experiments of Spallanzani and Dr. Beaumont, that the quantity of juice required for digestion, is proportioned to the quantity of food. When gastric juice has dissolved a certain quantity of food, it is saturated, and can dissolve no more. If, then, a man eats too frequently or too much, the gastric juice may be inadequate for the proper and easy digestion of the food, without any fault fairly attributable to the stomach. The organ is simply overtaxed. Indigestion brought on in this way, is the natural penalty for the violation of a natural law, or as a humorous writer has termed it, 'the remorse of a guilty stomach.'"

In cases of this kind, the amount of gastric juice may be as great as usual, and therefore only relatively small, but not unfrequently it falls far below the normal standard. The causes of deficient secretion are numerous: those enumerated by Dr. Budd arise generally from cerebral disturbances, such as long continued watchfulness, great mental excitement, fear, anger, mental anxiety, &c. But probably the most common cause of all is an indolent and sedentary habit of body, combined with the habitual consumption of more food than the system, with such habits, requires.

> "The necessary effect of an insufficient secretion of gastric juice is, of course, *slowness* of digestion. The food, instead of being completely digested and passing out of the stomach in two or three hours, remains undigested, or only partially digested for a much longer time—it may be, for twelve, or even twenty-four hours. The undigested portions of

food remain in the stomach, and during the slow process of digestion, there comes on a sense of weight or uneasiness at the pit of the stomach, which gradually lessens and at length ceases, as the food gets dissolved and passes out of the stomach. If any portions of the food remain solid, there is often at the end of some hours, when the stomach is getting empty, a distressing feeling of spasm, or cramp, at the pit of the stomach."

The ultimate consequence of the daily repetition of this state of things in weakening the powers of the stomach, enfeebling the body, and depressing the spirits is familiar to all. The treatment recommended by the author is based upon the plain common sense considerations suggested by the nature and cause of the difficulty, and consists mainly in attention to diet, combined sometimes with the use of ipecac, rhubarb, cayenne pepper, and other remedies which, when given in small doses, stimulate the lining membrane of the stomach, and cause a more abundant outpouring of the gastric juice.

Another disorder dependent sometimes upon the preceding, sometimes upon organic disease in the vicinity of the pylorus, and occasionally upon other causes, is "Fermentation of the Contents of the Stomach," accompanied now and then by the development of sarcinæ. To this interesting subject Dr. Budd devotes nearly two lectures, an analysis of which we would gladly present the reader did space permit.

Lecture XII treats of "Indigestion arising from defective Action of one of the Excreting Organs, or from some Fault in the Nutritive Processes in other Parts of the Body." Gastric irritability and an unnatural secretion from the lining membrane of the stomach as a consequence of disease in other parts of the body, the nervous system being assumed as the connecting link, is a fact which, with our present imperfect modes of investigating the nature and laws of nervous power, will probably remain unexplained for a long time to come. But not so with disorders of secretion dependent upon blood communication between organs, one of which is in a state of disease. Here chemistry steps in, and, by careful analysis, is enabled to discover the agency through which the trouble is produced, and to point with more or less certainty to the proper means of preventing its production, or modifying its influence. One of the more evident causes belonging to this class is defective biliary secretion.

"The stomach is in more direct relation with the liver than with any other important excreting gland. The stomach and the liver are parts of the same great apparatus, whose office it is to supply, from the crude matters taken as food, fit material for the sustenance of the body. The action of the one organ is in some degree complemental to that of the other. Dr. Prout long ago advanced the opinion, that the muriatic acid of the gastric juice is furnished by the decomposition of chloride of sodium or common salt, and that the soda thus set free in the blood, is eliminated with the bile. He was early led to the opinion, which the researches of Matteuci, Liebig, and others tend in some measure to support, that the principal digestive organs constitute a kind of galvanic apparatus, of which the mucous membrane of the stomach may be considered the acid or positive pole, and the hepatic system the alkaline or negative pole."

"Dr. Bence Jones has lately shown, that soon after meals, when the stomach secretes a large quantity of muriatic acid, the urine has a tendency to become alkaline; and that the soda set free on the decomposition of the chloride of sodium which furnishes the muriatic acid of the gastric juice, instead of being all eliminated by the liver, as Prout seems to have supposed, is in part eliminated by the kidneys. Other observers have shown, that when the stomach is pouring out a large quantity of acid, the alkalinity of the saliva also increases; and, since the increased alkalinity of the urine and saliva at such times results from the increased quantity of the soda in the blood, it is probable that the same law holds for all other secretions of which soda is an essential constituent. But still there is reason to believe that the opinion advanced by Prout is in part true, and that an intimate relation—and one, probably, of the kind which Prout supposed—exists between the secreting functions of the stomach and liver."

"If the secretion of the liver be defective in consequence of deficient power in the organ, or in consequence of the congestion of it that results from high living and indolent habits, the functions of the stomach are almost invariably disordered, and in conjunction with a slight yellow tinge in the conjunctiva and skin, there is a coated tongue, an impaired appetite, nausea, and especial disrelish of rich dishes, constipation; and often, with this defective action of the stomach and liver, there is disturbed or unrefreshing sleep and great depression of spirits."

Another cause, belonging to the same category, is imperfect action of the kidneys, by which the urea and other constituents of the urine contaminate the blood, and thus disorder the functions of the stomach, as is especially observed in the advanced stages of Bright's disease.

Again, the blood may be rendered impure, and the stomach be deranged, not only by defective action of the great excreting organs, but also from fault in the processes concerned in the waste and repair of the tissues in other parts of the body.

> "It was Dr. Prout who fixed our attention on this great class of disorders—disorders not depending on any visible structural change, but on some fault in those subtle processes that minister to nutrition. There are, doubtless, more disorders of this class than we have yet distinguished. They all lead to an unnatural state of the blood, from the excess of effete matter or from the presence of some unnatural and injurious principle in it; and often this leads to an unnatural state of the urine—the great drain through which the soluble effete matters of the body are cast off."

Assuming that these states of faulty assimilation are in many instances revealed to us by the urine, the author enters into a somewhat detailed account of the different conditions of the fluid, that have been established as evidences of the existence of certain constitutional and local disorders, and as the most reliable indications of treatment at present in our possession.

The three remaining lectures are devoted to some of the minor phases of indigestion, and to a brief and unsatisfactory appreciation of some of the remedies that are employed in the treatment of gastric diseases.

In conclusion, we must express our thanks to the author for the pleasure and instruction that we have derived from the perusal of his work, which, we doubt not, is soon to become the principal authority upon the specialty to which it is devoted. T. G. R.

ART. IV.—*Report of the Board of Managers of the Eastern Lunatic Asylum at Lexington, Ky., for the years* 1854–5.

THIS report exhibits an account of all the admissions since the opening of this institution in 1823, except for the three years from

1844 to 1847 inclusive. It furnishes, moreover, a brief but interesting statement of its present condition, besides some suggestions to the State Legislature in regard to certain proposed alterations in the management of the Asylum, which we consider as well adapted to promote its usefulness and the improvement of the condition of its inmates.

From the statistical tables which accompany the report, we learn that the whole number of persons admitted into the Asylum, from its opening up to December 3d, 1855, amounts to 2,113, of whom 1,423 were males, and 690 females. Of these 777 recovered, 852 died, 171 removed, 4 are unaccounted for, and 186 remain. A considerable source of the mortality was Asiatic cholera, with which the Institution has been visited several times. Out of 56 deaths, for example, which occurred during the year 1855, 34 were from this disease.

Dr. Chipley, the present worthy medical superintendent, in his report, points out the impropriety of allowing epileptic and idiotic patients to be placed in the same ward with persons suffering from mere mental infirmity, hallucination, or insanity, uncomplicated with long-protracted or incurable organic disease. His remarks on the necessity for classifying the patients and lodging them in separate rooms, in such an institution as that over which he presides, are highly judicious, and meet our cordial approbation. A proper regard for the interests of the insane and the honor of our State will, doubtless, prompt our Legislature to provide such means as may be requisite to enable the Asylum to fulfill, to the greatest advantage, the mission of charity for which it was founded. The success of the institution, since its commencement, has surpassed the most sanguine expectations that could be reasonably formed, from the condition of the patients placed under its treatment. In the generous protection of our people, the untiring energy displayed by its Board of Managers, and the skill of its medical officers, we trust it will continue to rise still higher in the scale of usefulness, maintaining its proud position as the oldest and best conducted Asylum in the West. From the well known character of Dr. Chipley for intelligence, observation, and research, we feel assured that his labors will be eminently blessed, and that the Lunatic Asylum at Lexington is destined to occupy a high rank among similar institutions in other parts of the country. D. J. O'R.

ART. V.—*Physical Exploration and Diagnosis of Diseases affecting the Respiratory Organs:* By AUSTIN FLINT, M. D., Professor of Theory and Practice of Medicine in the Medical Department of the University of Louisville; 8 vo., p. 630. Philadelphia: Blanchard & Lea, 1856.

THIS anxiously looked for work has at length appeared, although too late for a review in this number of our journal. We feel entitled to say, however, that it fully meets the high expectations which the enviable reputation of the talented and industrious author was well calculated to raise in the minds of his more immediate acquaintances and the profession generally. The volume consists of six hundred and fifty well filled pages, devoted almost exclusively to the symptomatology of the diseases of the air passages; and, if it does not completely exhaust the subject, it certainly contains far more positive information upon the matters treated of than is to be found in any similar contribution, whether American or European. We assume the liberty of thanking the author, in the name of the profession of the South-West, for this valuable record of his labors; and we congratulate the profession of the country generally, upon thus being able to point our European slanderers to another of the many undeniable evidences of the rapid progress and improvement which the science and art of medicine are undergoing in the heads and hands of their trans-atlantic children.

We hope to be able to present our readers with a carefully prepared analysis of the work in our next issue.

The style of the volume, in regard to type and paper, is eminently creditable to the taste and judgment of the distinguished publishers. T. G. R.

PART SECOND.

Original Communications.

ART. I.—*Remarks on Vesico-Vaginal Fistule, with an Account of a New Mode of Suture, and Seven Successful Operations.* By N. BOZEMAN, M. D., of Montgomery, Alabama.

IT would appear, from the silence of the older authors in regard to vesico-vaginal fistule, that it was a subject to which they paid little or no attention. But it would not be a fair inference from this circumstance, that the affection did not exist, or that its subjects did not apply for medical or surgical aid. The practice of obstetrics was less well understood then than at present; and it is reasonable to suppose that accidents resulting in fistule were comparatively more frequent. Surgeons must, therefore, at a very early period, have known something about it; but, being unable to afford the neccessary relief, they probably supposed that it would be a waste of words to record anything upon the subject. And, indeed, in turning to the written experience of more modern surgeons, we find that no advance was made toward the proper understanding and treatment of the disease until within the last quarter of a century. It is true, that previous to that time, it had been repeatedly described, and several methods of treatment had been proposed; but the profession manifested but little interest in the former, and the latter proved beneficial only in a very few cases. Now, however, there is no subject in surgery with the pathology and symptomatology of which we are better acquainted; and, as I hope to show in the few following pages, there is no disease of equal severity that is more amenable to operative procedure. But, before entering upon the subject, I shall premise a few anatomical considerations, which seem to me necessary to its proper understanding.

Anatomy.—The base of the bladder, as is well known, rests upon the anterior wall of the vagina, a small quantity of connecting areolar tissue alone intervening. The union of the two constitutes what is called the Vesico-Vaginal Septum, which is composed, therefore, of muscular and erectile tissue, covered upon both surfaces by mucous membrane. The shape of this septum, *i. e.*, the outline of the union of the two walls, resembles, somewhat, the heart upon playing cards, its base presenting upward, the neck of the uterus occupying the notch, and the apex downward and forward, toward the commencement of the urethra. Its area comprises, usually, about four square inches; and it may be stated here, that a clear knowledge of its shape and extent is oftentimes of the utmost importance in a surgical point of view; for, immediately outside of the limits mentioned, the surfaces of the vagina and bladder are invested with peritoneum, and any operation involving this structure is of course attended with additional risk.

Situation, Size, &c.—The most common situation of the opening constituting vesico-vaginal fistule is usually about the centre of the vesico-vaginal septum; but it may occur at any point: I have met with cases in which it seemed to occupy the extreme border of the septum. The size of the orifice may be no larger than barely to admit a tolerably large probe; but instances are on record in which the whole septum had sloughed away, thus leaving a chasm of enormous dimensions, through which the superior fundus of the bladder protruded, and made its appearance at the vulva, in the form of a large, fleshy-looking tumor. The shape of the fistulous opening is as various as its size and situation, but may be stated, as a general rule, to be oval from above downward, although the long axis is not unfrequently oblique or even transverse in its direction. The number varies from one to several; but I have never met with more than two. Of ten cases that have come under my observation, four were of the double variety, and the remainder single.

The presence of more than one fistule is a circumstance of considerable importance in reference to the chances of successful operation, as I shall presently attempt to show, and it is not a little surprising that writers upon the subject have so entirely overlooked this not uncommon complication. It is in cases of this kind that the method of operation which I am about to propose possesses, in my judgment, an advantage unequalled by any procedure heretofore invented.

The common *causes* of vesico-vaginal fistule are impaction of the child's head in the pelvis in protracted labors, and the misuse of forceps in instrumental deliveries; the vesico-vagnial septum in either case being so much injured as to fall into a state of mortification, involving a smaller or larger part of its extent. It is also an occasional result of lithotomy performed through the vagina; of malignant disease of the neck of the uterus, and of ulceration produced by the presence of a foreign body in the bladder or vagina. Mr. Brown, of London, reports a case which was occasioned by the combined presence of a calculus in the bladder, and the occurrence of parturition.

The *symptoms* of the disease are few, but well marked. Dribling of urine from the back part of the vulva coming on within a few days after labor, and producing excoriation of the nates and thighs, with an inability to empty the bladder in the natural way are usually conclusive; but, if any doubt should exist, a resort to a digital or specular examination will readily place the diagnosis upon a positive footing.

The *prognosis*, formerly pronounced to be unfavorable in all cases, may be now stated to be favorable in the great majority—a change which, considering the loathsome and disgusting nature of the malady, cannot but inspire the heart of every truly philanthropic surgeon with just and unbounded pride in his beneficent and noble calling.

Treatment.—Until within a few years past, so uniformly unsatisfactory were the results of the treatment of vesico-vaginal fistule, that many surgeons entirely despaired of ever being able to offer the poor afflicted subjects of this malady any hope whatever of permanent relief. But still, from time to time various plans were proposed, some of which proved more or less beneficial, and others again entirely useless. Among the former was cauterization with the hot iron, which having produced a few permanent cures, and mitigated many cases, was a step considerably in advance of the old practice of pronouncing all cases incurable. Indeed, this operation is still viewed by many otherwise intelligent surgeons, especially in Europe, as almost the only hope of relief. Among its most strenuous advocates may be mentioned M. Dupuytren and Mr. Liston, who, although now dead, are nevertheless considered as the representatives of modern surgery in the respective countries to which they belonged. That the actual cautery has done much good in many cases cannot be denied; but so uncertain a procedure, even in the hands of such men as the two just mentioned, justly claims but a minor consideration in the estimate of those who are fully acquainted with the present resources of the chirurgical art.

Succeeding the actual cautery, came the suture, which is said to have been proposed for the relief of the disease about the middle of the seventeenth century by a Dutch surgeon by the name of Roonhuysen. The practise was afterwards adopted by Fatio and Voelter, but with what success we are not informed; but it certainly could not have been very encouraging, as it soon fell into disuse. About the beginning of the present century, however, the suture was revived, and, variously modified, has formed the basis of almost every successful mode of treatment that has been practised both in Europe and this country.

In Germany different modes of employing the suture have been from time to time adopted. Wutzer and Dieffenbach are said to have practised it with the most success. The former is stated by Chelius to have advanced considerably farther than his predecessors by conjoining puncture of the bladder for the purpose of keeping this organ empty, and thus preventing the contact of the urine with the parts under operation. Little or no improvement, I apprehend, has been made upon the operation of these surgeons by their countrymen, judging from the recent procedures of Roser, Simon, Teuner and Boeck.*

In France the suture has undergone many ingenious modifications for the purpose of rendering it more efficient in the treatment of the affection under consideration, and for some of them considerable success is claimed. An account of them, however, would much transgress the limits of this paper, and prove at best more curious than useful. Of their general success and the estimate in which they are held, some idea may be had from the following remarks of Velpeau: "The suture, which must have first suggested itself to the mind, is of such difficult application that but few practitioners have ventured to make trial of it, so that scarcely any mention is made of it in the works which have issued from the school of Paris. To abrade the borders of an opening when we do not know where to grasp them, to shut it up by means of needles or thread when we have no point apparently to secure them, to act upon a moveable partition placed between two cavities hidden from our sight, and upon which we can scarcely find any purchase, has appeared to be calculated to have no other result than to cause unnecessary suffering to the patient."*

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* Amer. Med. Monthly, Aug., 1855.

Such is the opinion of the erudite and accomplished surgeon of the Hôpital de la Charité, an opinion derived doubtless from a careful consideration of all the operative procedures that have been suggested or tried in France, Germany, and Great Britain. And the statement of his distinguished cotemporary M. Vidal (de Cassis) is not less discouraging. His words are: "I do not believe that there exists in the science of surgery a well-authenticated complete cure of vesico-vaginal fistule, a fistule due to a loss of substance from the bas-fond of the bladder."† Of the success of the autoplastic operations devised and practiced by Jobert and Gerdy, we have no positive information. The former surgeon also operates with the suture, and there is reason to believe that he has met with much more encouraging results than any of his European brethren.

Turning now to Great Britain, what do we find, has been accomplished there in the treatment of vesico-vaginal fistule? London surgeons, with all their hospital advantages, until within a very few years past, gave this subject little or no attention. Neither Sir Charles Bell, Sir Astley Cooper, nor Mr. Samuel Cooper have so much as alluded to it, either in their writings or lectures. Mr. Robert Liston devotes to it but one paragraph, and, as it appears, attached more importance to what could *not* rather than what could be done by the surgeon. "Attempts," says he, "have been made to close the aperture by paring the edges, and then inserting sutures; but this is a proceeding both difficult in execution, and not likely to prove successful. The thinness of the parts, the presence of a secreting surface on each side, and the oozing of acrid urine betwixt the edges, all militate strongly against adhesion. No benefit can be expected from any treatment, unless the opening be of no great size; and, in such cases, the cautery will be found most effectual. * * * * By the cautery I have succeeded in relieving many, and in curing a few cases." *

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* Operative Surgery, Vol. 3. † Pathologie Externe. 2nd edit.

Druitt, in his "Surgeon's Vade-Mecum," devotes to this and four or five other diseases, together with their treatment, only a single page. The senior surgeon to Guy's Hospital, Mr. Bransby B. Cooper, it seems, has no experience at all with its treatment. He speaks of it as being most difficult of cure: "My colleague, Dr. Dever," he says, "has had several cases of recto-vaginal and vesico-vaginal fistule, which he has attempted to obliterate by plastic operations and sutures, caustics, and the actual cautery. The result of his experience proves, however, that very few cases are ever permanently cured, although, by means of the actual cautery, he has frequently reduced the abnormal opening to the size of a pin's head; but I believe that only in one or two cases has he succeeded in producing a permanent cure."† Mr. Erichsen says, that urethro-vaginal fistule, when small, may sometimes be closed by applying the electric cautery or red-hot wire to its edges, once a fortnight or three weeks; but he further remarks, "when the fistule is large, and especially when vesical, its cure can be accomplished only by paring the edges, and bringing them together with sutures, and thus attempting to procure union by the first intention. In effecting this, however, two difficulties present themselves—the sutures either cutting their way out too soon, or the trickling of urine between the freshly-pared edges interfering with adhesion." Of the various contrivances employed to overcome these difficulties, he recommends the bead sutures of Mr. Brooks, and the clamp suture of Dr. J. Marion Sims. "The treatment recommended by Dr. Sims," he observes "leaves little to be desired in the management of these cases." ‡ Prof. Pirrie, in his recent work on surgery, does not even mention the disease or its treatment. Mr. Brown, surgeon accoucheur to St. Mary's Hospital, has, within the last few years, gone far ahead of any of his cotemporaries, in the management of those diseases of the female

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* Elements of Surgery. † Lectures on Surgery. ‡ System of Surgery.

requiring surgical interference. His recent work shows that he has devoted much time and attention to the subject. Although his treatment of the disease under consideration has not been very successful, yet it has been conducted upon enlightened principles. As an illustration of the difficulties to be met with in any operative procedure, he gives the details of four cases treated by himself. Two of these were permanently cured; one, by the actual cautery and incision; and the other, by the quill suture. The remaining two were only partially relieved by the actual cautery and suture combined. Mr. B. employs the clamp as well as the quill suture.

Having thus briefly glanced at the state of surgical science, in reference to the disease in question, in Germany, France, and Great Britain, let us turn to our own country, and see what has been done there. And here I may state, without the least fear of contradiction, and with no little national pride, that the surgeons of the United States have so far outstripped their European brethren as to place this horrible complaint, which the latter have declared incurable, upon a par, as regards the probabilities of successful treatment, with accidents of like severity affecting other parts of the body.

Drs. Mettauer, of Virginia; Hayward, of Boston; Pancoast, of Philadelphia, and J. Marion Sims, late of Montgomery, Alabama, but now of New York, are the only surgeons in this country, as far as I am informed, who have paid special attention to the subject of vesico-vaginal fistule; and, in noticing their respective operations, it will suit my purpose to speak somewhat in detail concerning the different modes of closing the fistulous opening, as herein lies the superior advantages of one operation over another, as I shall presently endeavor to show.

Dr. Mettauer operated for the relief of this malady as early as 1830.* His method consisted in paring the edges of the fistulous opening, and maintaining them in contact with interrupted sutures made of lead wire. These he carried entirely through the vesico-vaginal septum, at a distance of an inch from the denuded borders. A sufficient number of them having been introduced, the ends of each wire were separately twisted together until firm coaptation of the edges was effected. The twisted extremities were afterwards cut off a short distance exterior to the vulva. On the third day the sutures were tightened by twisting them again; and about the tenth day they were removed. Such was the original method employed by Dr. Mettauer, and, with but little if any alteration, is the one he still practices. He has performed it quite a number of times, and claims considerable success.

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* Virginia Medical and Surgical Journal.

Dr. Hayward, without any knowledge of what had been done by Dr. Mettauer, performed his first operation in 1839, and published it the same year.* He has the credit, I believe, of having been the first to operate successfully in this country; but there is no doubt that Dr. Mettauer preceded him by several years, although the latter did not publish his operation until 1847. The peculiarity of Dr. Hayward's procedure consists in the mode of getting at the parts. He first introduces into the bladder, through the urethra, a whalebone bougie, with which, as a lever, the symphysis pubis serving as a fulcrum, he next brings down the base of the bladder to the vulva, and thereby exposes the fistule fully to view. He then pares the edges of the openings, and brings them together by the ordinary interrupted sutures, which, in their introduction, are not allowed to penetrate the mucous coat of the bladder. The operation being thus completed, and the bougie removed, the bladder is permitted to return to its proper place, and the sutures are allowed to remain until they become detached by ulceration.

This is the method now recommended by Dr. Hayward, although formerly he was in the habit of splitting the edges of the fistule, so as to present a more extensive surface for agglutination, and at the same time lessen the chances of piercing the mucous membrane of the bladder in introducing the sutures. He also directed the bladder to be again depressed after a certain number of days, and the sutures removed. Dr. Hayward has performed his operation twenty times, but with no very great success, having cured, I understand, but three cases permanently.†

Dr. Pancoast's method consists in adapting the edges of the fistule to each other on the principle of the tongue and groove. The posterior border he splits to the extent of half an inch, and pares the anterior to the shape of a wedge. The former is then made to receive the latter. In this way four raw surfaces are brought in contact, and held in this relation by his plastic suture. How much success Dr. Pancoast has had by this method I am not prepared to state. He reports, in the Medical Examiner, for May, 1847, two cases cured in this manner by himself.

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* Am. Journal of Med. Sciences. † Surgical Reports.

Lastly, we come to consider the method of Dr. Sims, a description of which I deem altogether unnecessary; for, being generally approved by the profession, it is well understood by every one interested in such matters. Suffice it to say that the peculiarity, as well as the great advantages of Dr. Sims' method, are to be found in his clamp suture.

Considering the comparatively small measure of success obtained by Drs. Mettauer, Hayward, and Pancoast, it would be useless to enter into a discussion of their relative merits, as I suppose that no one, in this country at least, will be likely to adopt the method of any one of these gentlemen, with the great advantages of Dr. Sims' method staring them in the face. But it is to the latter that I invite attention, and, however bold or fool-hardy the attempt may appear, I hope to be able to show that the clamp suture has serious objections that may be entirely obviated by the procedure presently to be described. In saying this, however, I do not wish to be understood as attempting to detract from the great credit due from the profession and the public to Dr. Sims for his untiring perseverance in bringing his method to its present high state of perfection. I consider that this gentleman is fully entitled to more than all the praise that has been bestowed upon him, both in America and Europe. To the honor of his professional brethren in this country, it may be stated that no one has been found who has not gladly accorded to him the high distinction that he at present occupies. I am sorry that the same cannot be said of European surgeons in general, for, with the exception of Mr. Erichsen, Mr. Brown, and Mr. Druitt, of London, no one on the other side of the Atlantic has, to my knowledge, proved sufficiently frank to do full justice to Dr. Sims' claims. Fully impressed, therefore, with the importance of the position I assume in attempting to show that the clamp suture is objectionable, I proceed to the task, actuated, as every inquirer after truth should be, by no other motives than a desire to make facts and principles subservient to the great ends of science.

In the first place, then, Dr. Sims states that the "clamp suture lies embedded in the tissues for an indefinite period without danger of cutting its way out as do silk ligatures." This proposition is doubtless true, so far as it implies that the clamp suture is much less liable to cut out than silk ligatures; but the question is, does not the clamp suture itself irritate and very often cut out? Dr. Sims says not. My experience with it, however, has led me to a different conclusion. I have several times seen it ulcerate out, and that too within five or six days, thus entirely defeating the object of its application. When there is much dragging of the parts, this is almost sure to occur. The liability to this accident I have found greatly increased by an indurated condition of the tissues, which very often exists on one or both sides of the fistulous opening. The ill consequences of the ulceration occasioned by one or both clamps are sufficiently evident. Other fistules are in this way liable to be formed, as occurred in a case alluded to by Dr. Mettauer,* and even if this does not take place, the morbid action may extend to the raw edges of the opening, and thus interfere with the healing process. Gangrene and sloughing of the included parts may take place also when the clamps are applied with too much force.

Another objection to the clamp suture consists in the fact that to apply it properly requires more experience than most practitioners of surgery can be supposed to possess. The operator must be able to judge of the condition of the tissues, whether indurated or not, and whether this condition is confined to one or both sides of the fistulous opening. If induration exists, he must know what precautions are to be observed in the arrangement of the clamps, and the dangers resulting from a neglect of these precautions. Many failures, I have no doubt, can be referred to a want of familiar acquaintance with these matters, which, as just stated, is to be gained only by much experience.

Another, and the greatest objection to Dr. Sims' method, is the frequent impossibility, in cases of double fistule, of applying two sets of clamps at the same time. This I regard as a consideration of the utmost importance. If two fistulous openings are found to exist, and circumstances will allow of but one being closed, failure is almost sure to follow, owing to the escape of urine through the other into the vagina, and its contact with the denuded edges.

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* Op. Cit.

Still another objection is the impossibility of making the sutures act only in one direction. They have all to be introduced exactly alike; each wire must be entered on the same line, at a proper distance from the edge of the fistule, and brought out in a similar manner, so that when the shot are secured in their places, the same amount of traction, and in the same direction, shall be exerted upon each suture. Unless these precautions be observed, the clamp will not lie easy, and is liable to do injury.

Such I conceive to be most important objections to the clamp suture. There are others of a minor consideration, but they need not be mentioned here.

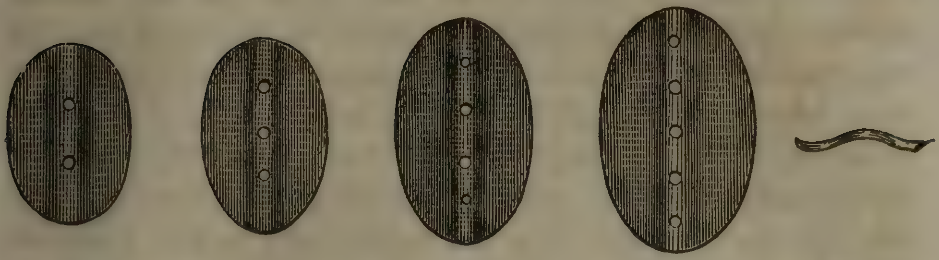
Very soon after I began to employ this suture in the treatment of vesico-vaginal fistule, I discovered these faults; but it was a long time before I could believe but that it was the best and surest plan of procedure that could be adopted. Failure upon failure occurred, when from the favorable nature of the cases such results were not to be expected. Finally a case of double fistule came under my care. The two openings were in close proximity, and the long axis of one was at right angles to that of the other, thus precluding the possibility of using two sets of clamps at once. Thus circumstanced, I adopted the only alternative, which was to close one and leave the other for a future operation. Accordingly I applied the clamps to the superior aperture, as the peculiar nature of the parts required that this one should be closed in order that a resting place might be formed for one of the clamps in the next operation. On the tenth day, I found upon examination that the apparatus had cut out entirely. The failure I decided to be due to the injurious effects of the urine upon the denuded borders of the fistule, and upon the raw surfaces produced by the pressure of the clamps; and I became furthermore satisfied that I should never be able to cure the case, unless I could invent some contrivance by which either to close both openings at one operation, or to afford complete protection to the denuded edges of one during the healing process. The thin and raw edges of the fistule when brought together by the clamp suture under such circumstances, are necessarily acted upon by the poisonous urine on both the vesical and vaginal surfaces, union by the first intention being thereby rendered very improbable, even under auspices otherwise most favorable, and in the majority of instances almost clearly impossible. To contrive an apparatus that would fulfill one or the other of these indications required, I supposed, much more inventive talent than I possessed; and after a little thought, I abandoned all hope of providing anything that would answer the purpose. Sometime afterwards, however, while buttoning my vest, it occurred to me that a somewhat similar process might be applied to such cases as the one above cited, and after turning the matter over in my mind, I determined to put the idea in practice. Accordingly I made a contrivance on the button principle, and applied it in a case where the clamp suture had failed three times. The result was, as it has been in every trial since, as satisfactory as could be desired.

With such flattering results in its favor, I propose now to offer the operation to the profession for what it is worth. It will be found to be simple and easy in its performance, applicable to the great majority of cases, and devoid of any inconvenience to the patient. From its construction, mode of action, and the circumstances which led to its adoption, I shall call it the *Button Suture.* It is, however, only a modification of the twisted, as the clamp is a modification of the quill suture. After a brief description of the apparatus, and the mode of applying it, I shall add the details of four successive cases requiring seven operations in which I have employed it without a single failure.

The essential parts of the apparatus consist of wire for the sutures, a metallic button or plate, and perforated shot to retain the latter in place. The wire should be made of pure silver, about the size usually marked No. 93, and properly annealed. A length of about eighteen inches should be allowed for each suture.

The button possesses several peculiarities. It may be made of either lead or silver. The former, hammered out to the thickness of 1-16th of an inch, answers the purpose tolerably well. The latter can be made still thinner, and does better on several accounts; it is lighter, less likely to yield under pressure, admits of a higher polish, and allows the wires to be drawn through the small holes, without dragging.

Fig. 1.



Full Size. End View.

The object of the button is to cover the fistulous opening after the introduction of the sutures, and its size and shape will therefore vary somewhat according to circumstances. The shape of those that I usually employ is oval (fig. 1), but they may be circular, semi-circular, L or T shaped, to suit individual cases. The size will also necessarily vary, but it is seldom that one larger than the largest here represented, say 1 1-4 inches in length and 5-8ths of an inch in breadth, is required. But whatever the shape or size, it is a matter of great importance that the under surface should be slightly concave, and the edge turned up. Along the middle of the button are arranged perforations for the passage of the sutures, which should be sufficiently large to admit two thicknesses of the wire freely. The number of these openings will depend of course upon the number of the sutures, which are usually placed about 3-16ths of an inch apart.

The shot are No. 3 in size, and perforated for the passage of the wires.

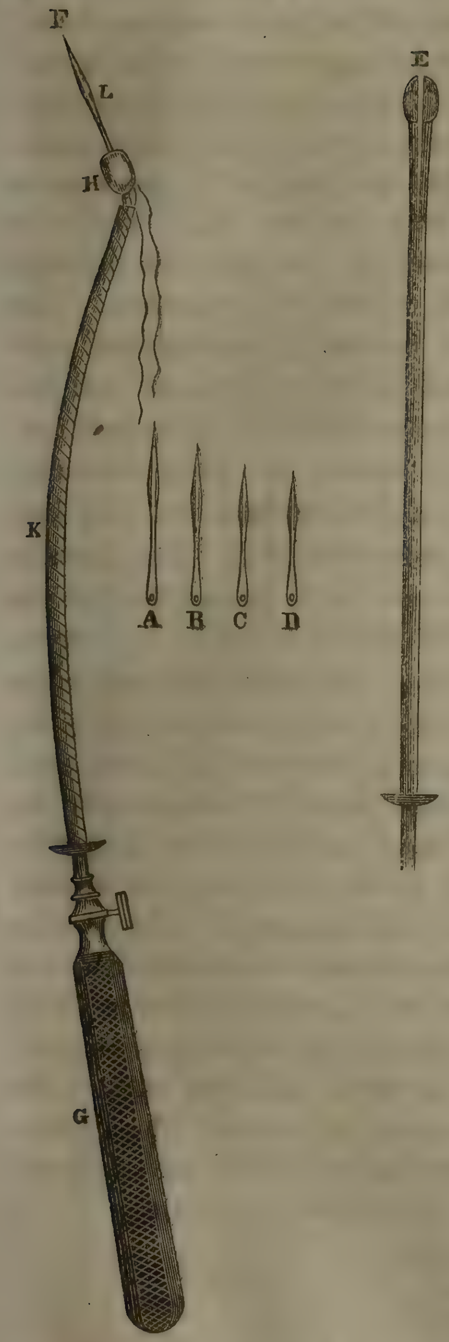
Operation.—In remarking upon the different operations which have been performed in this country, I stated that I should confine myself mainly to a consideration of the several *modes of suturization*, and, singling out that of Dr. Sims as the only one deserving of notice, I have attempted to show wherein it is deficient. It is not necessary, nor is it my purpose, to enter into a detailed account of the earlier steps of the operation; for in regard to these matters Dr. Sims has left little or nothing to be desired. I must mention however, that I generally bevel the edges of the fistule upon the vaginal aspect to a greater extent than is recommended for the clamp suture. The object of this is to obtain large surfaces for agglutination, and at the same time to admit of a sufficiently firm degree of approximation to prevent if possible the least passage of urine through the part.

The edges of the fistule having been pared, the wire sutures are to be lodged in their respective places in the usual way, by attaching them to the ends of silk ligatures previously carried by means of a needle through the septum from one side of the fistule to the other. But in connection with this step of the operation, there is some difference between Dr. Sims' procedure and my own. In the first place, I do not usually take so firm a hold of the tissues, the space between the entrance of the needle and the edge of the fistule rarely if ever exceeding half an inch, and it matters not whether the parts be indurated or not, the wire is not likely to cut out very soon. Secondly, it is not necessary to observe the same scrupulous care in entering and bringing out the sutures upon an exact line with each other; for, as will be hereafter understood, each one is in its action entirely independent of the others. Thirdly, instead of being obliged always to place the sutures parallel with each other, I have it in my power, if the peculiar nature of the case indicate, to insert them in any direction, and am thus enabled to bring within the sphere of successful treatment a large class of cases, which, owing to the irregular shape of the fistule, and the scarcity of tissue not admitting of extensive paring, cannot be subjected to the clamp suture.

In regard to the needle for passing the ligature, there is great diversity of opinion. Nearly every operator has one to suit his own peculiar fancy, and probably uses it, after some little experience, to better advantage than he could any other. M. Jobert recommends the spear-pointed spring canula of Lewziski. Dr. Druitt prefers the fish hook needle, and some surgeons employ the ordinary short curved variety. I am myself in the habit of using one that is short, straight, and spear-pointed, as represented in fig. 2, A, B, C, D, the length varying from a half to three fourths of an inch.

The needle-holder or clasp may be straight (fig. 2, E) as recommended by Dr. Sims, Mr. Brown, of London, and others, or it may be made of the shape represented at G. The latter was made at my own suggestion, and I have found it to answer a better purpose than the straight variety where the fistule is situated far to one side or the other. It consists simply of the ordinary steel clasp (H) having a long substantial shaft and a flexible metallic

Fig. 2.



canula (K) for the purpose of approximating the branches of the clasp. The latter are furrowed in various directions for the purpose of holding the needle firmly, and allowing it to be placed at any angle that may be desired. (At L may be seen a needle clasped and ready for use.)

The introduction of the needle in reference to the structures to be penetrated, is justly considered a matter of no little importance. Dr. Mettauer and some others advise that the instrument be carried entirely through the vesico-vaginal septum. Drs. Sims and Hayward strongly disapprove of this practice on the ground that other fistules may thus be produced; and I fully agree with them. Indeed, I consider that too much care cannot be taken to avoid piercing the mucous coat of the bladder; and the needle, instead therefore of being carried through the septum, should be brought out at at the edge of the opening in the vesical sub-mucous areolar tissue.

As heretofore mentioned, the wire for each suture should be about eighteen inches in length, and the sutures should be placed usually not more than 3-16ths of an inch apart, although if the tissue be sufficiently abundant to admit of easy approximation without dragging, an interval of 1-4th of an inch may be left.

Fig. 3.

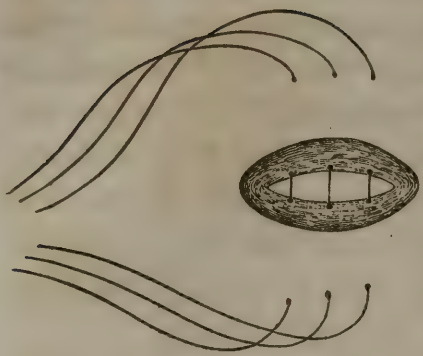


Figure 3 is a representation of a fistule of the most common shape, with its edges pared in the bevelled manner heretofore mentioned, and the silver wires drawn through.

The next step in the operation is to draw the raw edges closely in contact, by bringing the opposite ends of each wire together. This may be readily accomplished with an instrument which I have invented for the purpose, and call the *suture adjuster*. It consists simply of a steel rod, fixed in an ordinary handle, its distal extremity flattened, perforated, and raised upon one side into a kind of knob as represented at A. The opposite ends of each suture are to be passed through the aperture in the end of the adjuster from the convex toward the flat surface, and while the former are held firmly between the forefinger and thumb of the left hand, the latter is carefully slipped down upon the wires until it comes closely in contact with the tissues. In this way the edges of the fistule are gently forced together, and, for the time being, the stiffness of the wire prevents their separation. Should it be found, however, that accurate coaptation does not take place, owing to the imperfect manner in which the edges have been pared, the sutures may be readily loosened, and the defect remedied without the necessity of withdrawing the wires. The appearance of the parts, after all the sutures have been adjusted, is faithfully represented in figure 5.

Fig. 4.

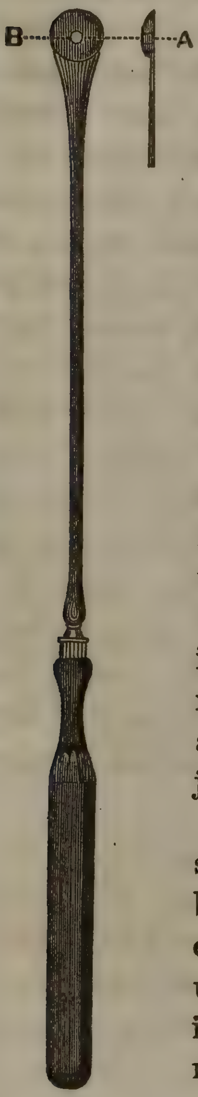
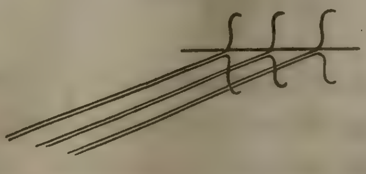


Fig. 5.



A button of suitable shape and size having been previously provided, is now to be placed upon the wires, (fig. 6) its concave surface corresponding to the vesico-vaginal septum, and carried

Fig. 6.

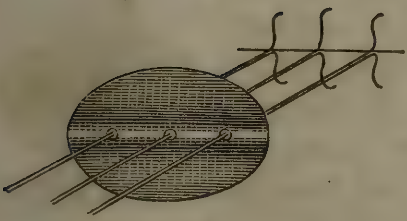
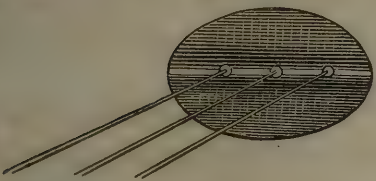
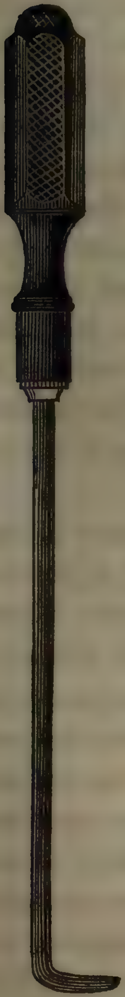


Fig. 7.



down in contact with the septum. The wires being again held in the left hand, the button should be pressed gently against and adapted to the surface of the parts (fig. 7). This may be accomplished by an instrument which I call the *button adjuster*, represented at figure 8, consisting of a stiff iron rod, bent at a right angle within half an inch of its distal extremity, and inserted into an ordinary wooden handle.

Fig. 8.



The shot are to be now passed down over the approximated ends of each suture (fig. 9) to the convex surface of the button, and here each one is to be successively grasped with a pair of strong forceps, (such as is represented at figure 10,) and held against the button, while traction is made upon the corresponding suture, in order to bring the vaginal surface of the septum in close contact with the concave surface of the button, and insure close coaptation of the edges of the fistule. This having been satisfactorily accomplished, sufficient force is exerted upon the forceps to compress the shot, and thus prevent its slipping. The operation is then concluded by clipping off the wires close to the shot, as seen at figure 11. The apparatus is allowed to remain on, generally, not more than ten days.

Remarks.—After the foregoing description of the construction and application of the button suture, it is unnecessary that I should add any thing by way of explaining its modus operandi. Its principle, as heretofore stated, is founded upon and is anala-

Fig. 9.

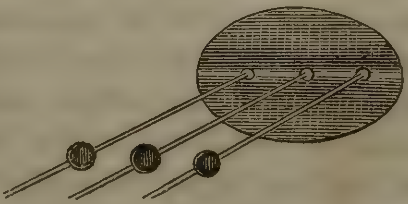


Fig. 10.

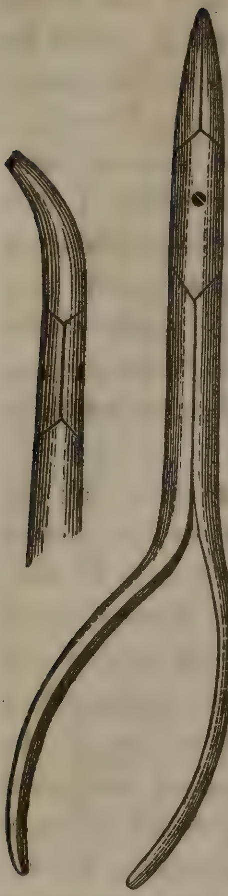
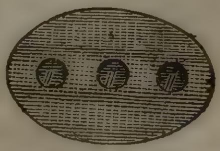


Fig. 11.



gous to that by which the vest or other clothing is ordinarily fastened. The only marked difference is, that in the latter process the button is first secured to the vest, and then the two sides brought together; while in the former the process is reversed, the opposite edges of the opening to be closed being brought together, and then the button put on.

One of the marked peculiarities of the button suture is the separate and independent action of each wire, as a consequence of which, as before stated, it is not necessary that the separate points should be parallel with each other, but may be placed in any direction, even at right angles, if the shape of the fistule should require it. The only precaution requisite is to have the shape of the button made to correspond to that of the fistule, and its perforations to the arrangement of the points of suture. Another advantage derived from this circumstance consists in the fact that if too much force be applied to one suture in drawing the edges of the fistule together, no injury results in consequence to the others, and such an accident as sloughing is hardly to be thought of.

By means of the button suture quietude and an accuracy of approximation are secured to a greater degree than by any apparatus that has ever before been invented, two circumstances upon which the cure of fistules oftentimes solely depends. Splints properly adapted to the arm in transverse fracture of the humerus do not hold the fractured ends of the bone so accurately in apposition as does the button suture the edges of the fistule. But, unlike splints applied to the limbs, there is little or no outside pressure upon the approximated edges of the fistule, for, by the concave form of the under surface of the button, the pressure is thrown some distance off, and any injury that might result from this circumstance is entirely obviated.

But probably one of the most important advantages of the button suture is the protection that it affords to the denuded edges of the fistule. It is a fact well known to surgeons, that a simple incised wound will heal with much more rapidity when shielded from the atmosphere and all other extraneous influences, than, all other circumstances being equally favorable, when there is no such protection. Vesico-vaginal fistule, after the edges have been pared, being truly an incised wound, is subject, of course, to the same general laws. The button fulfills this indication of protection with positive certainty, if its application be properly attended to. It is true that in a deep cavity like the vagina, the opposite walls of which are nearly always in contact, the atmosphere can have little or no effect upon the affected parts. But there are other and far more obnoxious influences to shut out; and of these the urine, in cases of double fistule, is most hurtful, for, as it is not commonly the case that both openings are closed at the same operation, the one first operated on, without some protection, is continually bathed in this poisonous fluid. I say *poisonous*, for few will deny to urine such an influence upon raw surfaces, and the consequence is that failure from this circumstance alone oftentimes occurs. Leucorrhœal discharges are also more or less harmful, a fact of which Chelius was aware, but I do not know that any other author has made mention of it.

Summary.—My experience with the button suture, as detailed in the history of the seven operations appended to this paper, has, I think, established its superiority to the clamp suture in the following particulars:

1st. It is simpler in its construction, and applicable to a greater number of cases.

2d. It affords complete protection and perfect rest to the approximated edges of the fistule.

3d. If two fistulous openings exist, one or both may be closed at the same sitting, according to the inclination of the operator or patient, without reference to the condition of the parts.

4th. The introduction of the sutures does not demand the same exactness in regard to the position of the points.

5th. The independent action of each suture renders parallelism unnecessary, and thus gives the operator the liberty of introducing them in whatever direction may best suit his purpose.

6th. If perfect coaptation be found wanting after the edges of the fistule have been brought together, it is not necessary to remove the sutures, but simply to loosen them in order to perfect the paring.

7th. The apparatus does not irritate, it matters not what the condition of the parts may be, provided they are not in a state of progressive ulceration or inflammation.

8th. The apparatus requires to remain in position seldom longer than ten days.

Having thus completed an imperfect account of the construction of the button suture, and attempted to establish for it the first place among similar contrivances for the treatment of vesico-vaginal fistule in the estimate of the profession, I shall conclude this paper by an account of all the cases in which it has been employed, subjoining a simple statement of its success in comparison with that of other procedures.

CASE I. — *Vesico-Vaginal Fistule of nearly three years standing; failure of three operations with the Clamp Suture; one operation with the Button Suture entirely successful.*

THE patient was a young colored girl of small stature and delicate constitution. She was confined with her first and only child, August, 1852, and states that she was in labor about forty hours; the child, which was large, having to be eventually removed with instruments. Several days after delivery, dribbling of urine occurred from the vagina, which continuing, together with other indisposition, confined her to bed for five or six months. The following spring she was operated upon according to the method of Dr. Sims', but was not relieved. She came under my charge a short time afterwards, and upon examination, I readily discovered a circular opening about the size of a No. 6 catheter, occupying the vesico-vaginal septum near the neck of the uterus and a little to the left side. On the right side the tissues were in a normal condition, but on the left very much indurated. After due preparation of the system, I applied the clamp suture in the usual way. On the thirteenth day, I examined and found that the clamp on the left side had cut entirely out, and the aperture considerably enlarged.

Shortly after this unsuccessful operation, the patient's general health became very much impaired, and it was thought advisable to allow her to return home. I heard no more of the case until April of 1855, when she was again placed under my care, having, in the meantime, entirely regained her usual good health. I found on making an examination, that the fistule was somewhat smaller than when I last saw her, but the induration of the left border still existed. Aside from this latter circumstance, I considered the case altogether favorable and felt very confident that an operation would prove successful. Accordingly, on the 12th of April, I applied the clamp suture again. The edges of the fistule came together beautifully, but owing to the indurated condition on the left side, the corresponding clamp could not be made to embed itself, and consequently rested on a plane higher than the one on the opposite side. Notwithstanding this rather unfavorable feature, I was very sanguine of success. On the thirteenth day, I examined the parts, and, to my great mortification, saw that the left clamp had again cut out, and thus enlarged the opening.

After two such signal failures with the only operation that I then considered worthy of confidence, I was much discouraged, and had serious thoughts of abandoning the case altogether; but it was only a week or two subsequently, that the principle of the button suture first suggested itself to me, and I immediately determined to subject the case to an experimental trial. All things being ready, on the 12th of May I put the new method in operation. Everything seemed to progress favorably. On the thirteenth day, I removed the apparatus, and to my great delight found the fistule completely closed, and not the slightest evidence of irritation except what might be naturally expected around each suture.

CASE II.—*Two Vesico-Vaginal Fistules of seven months standing; two operations with the Button Suture; both entirely successful.*

KITTY, a colored girl of small stature, aged 18, was sent to me from a neighboring County, on the 24th of May, 1855. She stated to me that she always enjoyed good health until the birth of her second child, the preceding October, with which she was in labor three days; the child was of large size, and had to be mutilated before delivery could be effected. She did not discover dribbling of urine until the second week; during labor and for some time afterward, she had a numb feeling in the lower extremities; was not able to leave the bed for two months, and even then could not walk. From that time until she came to me, she sat the greater portion of her time upon a stool with a hole in it, to allow the urine to dribble into a vessel placed beneath. Owing probably to the constancy of that position, sciatica was induced and greatly augmented her sufferings.

Her appearance, when I first saw her, was the most perfect picture of misery that I ever beheld; emaciated to such a degree that her lower extremities were not larger than chair posts; unable to walk or even to stand; racked with pain; writhing under the excoriating effect of the uncontrolled urine; with the fatigue of travelling nearly two hundred miles added; all taken together, rendered her an object of the most extreme commiseration. After allowing her to rest for a couple of days, I made an examination, found her thighs and buttocks extensively excoriated, the labia majora almost completely encrusted by calcareous matter, and so sensitive, that the least effort to separate them, caused excruciating pain. Before the vagina could be explored, this deposit had to be removed, and even then the suffering was considerable, owing to an extremely irritable condition of the organ, and a protrusion of the mucous coat of the bladder through the fistulous opening. When the speculum was introduced, I discovered that the posterior wall of the vagina could not be raised up with usual facility. This I soon found resulted from a morbid attachment of its two walls. The adhesion extended obliquely across from the right side of the cervix to the left side of the vagina, thus concealing from view the os uteri, and rendering an exploration of the entire canal impossible. A fistulous opening, three-quarters of an inch in length, occupied the vesico-vaginal septum, and extended from near the beginning of the urethra obliquely upwards and to the left, terminating abruptly at the point of coarctation. Here a careful examination revealed a small opening which allowed a probe to pass into the *cul de sac* above, and from thence into the bladder, showing clearly that another fistule existed in this situation. Having thus ascertained the true condition of things, I became satisfied that two operations would be required. The fistule first described was accessible, and demanded my first attention, owing to its larger size and the very irritable state of the mucous coat of the bladder which protruded through it. I thought it advisable, however, before attempting any operation, to improve the patient's general health. Accordingly she was put upon the use of Precipt. Carb. Iron three times a day, and confined to bed upon her back, with a catheter in the urethra, in order to divert the urine from the vagina and excoriated parts as much as possible. Under this course of treatment she very soon began to mend, and not long afterwards could walk about; which she had not attempted before for months.

June 12th, I proceeded to apply the button suture to the lower opening. Much difficulty was encountered in paring the edges, owing to the great resistance of the patient, and the herniated condition of the mucous coat of the bladder. Four sutures were required; the button was ⅞ths of an inch in length, and about ⅝ths in width. For two or three days after the operation there was considerable fever, and pain in the hypogastric region, and I feared something serious might result; but things soon took a favorable turn, and the case seemed to do well until about the seventh day. At this time a great discharge of urine occurred from the vagina, and my first impression was that the sutures had given away; but upon examining the parts carefully, I discovered the whole of the difficulty to depend upon tympanitic distension of the bowels, attended at times with powerful peristaltic action. When the latter would occur, I found that there was a sudden increase in the flow of urine, clearly resulting from downward pressure upon the bladder. To obviate the trouble, I gave several remedies, mostly carminatives; but none of them seemed to be productive of any good. Finally, I resorted to the use of Turpentine, which answered the purpose to a very great extent, though not entirely.

Feeling a little uneasiness as to the result, notwithstanding the discovery of the source of trouble, I determined on the ninth day to remove the apparatus. Upon introducing the speculum into the vagina, the parts presented indeed a most unpromising appearance; the mucous membrance was of a deep red color, and the button completely encrusted with earthy matter. I now had a firm presentiment that all was not right; but when the sutures were clipped, and the button raised, I found to my great satisfaction, that union of the parts was perfect.

The catheter was worn a few days longer, and the patient then allowed to get up. Her general health now improved rapidly, and it was not long before her sciatica entirely disappeared.

In a few weeks I made preparation for the other operation, by first breaking up the morbid adhesion between the two walls of the vagina, so as to expose the fistulous opening above. To prevent reunion of the parts, a bag, made of oil silk and stuffed with bits of sponge, was introduced into the vagina. This was removed daily, and injections of cold water used, by which means the upper extremity of the vagina was in a few weeks dilated to its normal size, and the fistule well exposed.

August 23d, everything appearing as favorable as could be expected, I proceeded to operate; only three sutures were required; but as in the former operation, I had much difficulty, owing to the resistance of the patient. Tympanites supervened again several days after the operation, and caused the patient a good deal of suffering; but with this exception the case did well.

On the ninth day I removed the apparatus, and had the satisfaction of finding an entirely successful result, and not the slightest irritation had been produced. The improvement of the patient, in every respect, was now rapid; and when I discharged her in September, she was as active and sprightly as though she had never had a sick day.

Remarks.—The bad health of this patient, the existence of two fistulous openings, a herniated condition of the mucous coat of the bladder, a morbid attachment of the two walls of the vagina, and an exceedingly irritating quality of the urine, were all circumstances which strongly militated against the treatment. It is indeed one of the most remarkable cases that has ever come under my observation, and, I may add, that a better case for illustrating some of the advantages claimed for the button suture, and especially that of protection to the denuded edges of the fistule from the poisonous effects of the urine, could not have been selected. After removing the button employed in the first operation, its very shape and size were found impressed upon the parts over which it rested during the healing process, and the pale red color of the mucous membrane here, contrasted beautifully with the deep red and fiery appearance of that which had been exposed to the urine escaping through the upper opening.

CASE III.—*Two Vesico-Vaginal Fistules of eighteen years standing; two successful operations with the Button Suture.*

DINAH, a colored woman, stout and heavily built, about 47 years of age, was placed under my charge on the 28th of June, 1855. She stated that the disease under which she was laboring, was produced by the birth of her fifth child in 1837. As well as she could recollect, she was in labor about a day and a half; was attended by a physician, but did not know whether instruments were employed to effect delivery or not. Dribbling of the urine commenced a few days afterwards, and in this condition the poor creature had dragged out eighteen years of miserable existence. During this period she miscarried quite a number of times; only one child having gone to the full time.

Upon examination, I found a fistule near the centre of the vesico-vaginal septum, circular in shape, and sufficiently large to admit the index finger into the bladder. Supposing this to be the only opening, on the 5th of July I applied the button suture. On the tenth day it was removed, and the parts found to be perfectly united, not the slightest irritation having been produced by the apparatus. In a few days afterwards the patient was allowed to get up, but, to my surprise, there was still dribbling of urine. I apprehended therefore, that the newly formed cicatrix had givən away, and there was a reproduction of the fistule; but making an examination, I discovered that such was not the case. I was now at a loss to account for the appearance of urine; but upon a more careful exploration of the vagina, I found another very small opening, situated far up on the right side, at least an inch from the one I had closed.

The whole difficulty was now explained. Another operation was required; but, owing to the bad health of the patient, I was not able to perform it until the 10th of September.

This fistule, although small, had a peculiarity I had never met with before. It was valvular, *i. e.* the opening through the vaginal part of the septum did not correspond to that of the vesical. Two sutures were sufficient to bring the edges together. Things went on well, and on the tenth day, I removed the apparatus, and found union perfect.

Remarks.—In this instance the fistulous openings were of eighteen years standing, the patient old, and her general health not very good; yet the result was as prompt and decided as could have been desired. One of the great advantages claimed for the button suture, namely protection to the denuded edges of the fistule, was again forcibly illustrated in this case.

CASE IV.—*Two Vesico-Vaginal Fistules of nine years standing; several failures with the Clamp Suture; Button Suture employed with entire success.*

THE patient, a mulatto girl, aged about 25, of large size, came under my charge in September 1855. She says that she always enjoyed good health until the birth of her first child in 1846, at which time she became the subject of her present difficulty. According to her account, the labor lasted three days, and during that time she passed little or no urine; does not know whether instruments were employed or not; discovered very soon afterwards dribbling of urine. She also states, that she was sent to New Orleans, and there treated for a long time, with but little if any benefit. Since then she has been operated upon several times according to the method of Dr. Sims', but the relief afforded was only partial.

Upon examination, I found two fistulous openings, one about two inches from the cervix, and a little to the left side; the other, a little larger, was, situated far to the right, at a point just where the anterior and posterior walls of the vagina become continuous.

On the 10th of September, I proceeded to apply the button suture to the larger opening. It was my intention to close the other also at the same time, but the patient preferred to wait. Only two sutures were required, and on the tenth day I removed the apparatus, and found union perfect.

October, the 18th, I operated upon the other fistule. This I found presented the same peculiarity that was observed in the preceding case, in being of a valvular form. Only two sutures were required, and on the tenth day I removed the apparatus, and found adhesion perfect, without the slightest irritation in the surrounding parts.

Remarks.—The result in this case was as satisfactory as could be desired; it needs no comments. If it proves anything, it is that the button suture was better adapted to the case than the clamp suture, which latter had been long and perseveringly tried.

Conclusion.—Having now finished a description of my mode of treating vesico-vaginal fistule, together with the narration of all the cases in which it has been employed, I propose, in conclusion, to compare its results with those obtained by other methods.

Since the 12th of May last, I have performed seven successive operations without a single failure. This is the amount of my experience with the button suture. Now to form anything like a proper estimate of the several modes of treatment heretofore recommended, it is necessary first to ascertain what proportion of the operations according to each have been successful when compared with the whole number performed. In this way only can their respective merits be properly set forth. To effect this object, I have examined, so far as my opportunities allowed, the records both of Europe and this country; but as the data are imperfect, I have not been able to arrive at very satisfactory conclusions.

Chelius speaks of Wutzer as having had the greatest success. Of eighteen cases operated upon, three were radically cured. We are not informed how many operations were performed in all.

Jobert, by the anaplastic process, cures, I am induced to believe, about one-half of his cases. What proportion of his operations fails, I have not been able to learn.

Mr. Henry Earle is said to have operated thirty times upon one case before succeeding. The failures here were as twenty-nine to one.

Mr. Brown operated ten times upon three cases, and obtained one successful result. The failures here were as nine to one.

Dr. Hayward operated twenty times upon nine cases, and obtained three successful results. The failures here were as seventeen to three.

I am not prepared to state positively what proportion of the whole number of operations performed according to the method of Dr. Sims has been successful. Judging from my own experience, and from what I have seen of it in the practice of others, I am inclined to think that the average is not over one-half.

In regard to my own cases, it may be supposed by some that they were all peculiarly favorable, which accounts for my unprecedented success; but this was not the case: a reference to their individual histories will show that they were quite the reverse. The very fact of two of them having resisted the repeated application of the clamp suture, is proof sufficient upon this point. The other two were each double fistules, and therefore very unfavorable. One of them, case 11, I consider the most unpromising I have ever seen, that was at all curable.

In conclusion, I freely acknowledge that the results thus far obtained, by the use of the button suture, although so remarkably successful, do not amount to a sufficient number to justify an indisputable claim to superiority over all other procedures; and I do not, therefore, urge its adoption, by the profession, without farther trial. This is all I ask for it at present. My little experience with it has led me to believe that the principles upon which it acts are more nearly correct than any heretofore suggested; but if, upon more careful examination, this be found not true, it will only prove that the success of my seven operations was a most remarkable and heretofore unheard of coincidence.

MONTGOMERY, Jan. 1st, 1856.

ART. II. — *Case of Varicocele cured by Retrenchment of the Scrotum:* By SAM'L B. RICHARDSON, M. D.

THE well-known chagrin and mental despondency, resulting sometimes in mono-mania and suicide, which constitute a part of the history of this distressing and not unfrequent malady; not to mention the uncertainties, danger and sometimes fatal results of operations for its radical cure heretofore, impart more or less of interest to every well attested case of successful treatment. With these views, the following observations are placed before the profession.

Case. B—— H——, Esq., of Southern Kentucky, aged 29 years, unmarried, of respectable family, possessing a good constitution, the only disease from which he has ever suffered being intermittent ague and fever, which occurred during his adolescence and early manhood.

In the midst of health and cheerfulness, on the 27th of October, 1838, an amicable rencounter took place between himself and a companion, in a tussle or wrestle, resulting in his friend falling beneath him. Just at the moment of greatest effort, he felt a sharp cutting pain, of short duration, in his left spermatic cord near the external ring. The day succeeding, a tumor was discovered in the cord near the testes, which gradually increased in size up to the time of operation. A month succeeding the accident, pain, with a sense of languor and aching, was felt in the right groin, hip, and loins, attended with no inconsiderable mental despondency, which symptoms afterward frequently exascerbated and remitted. In the month of May, 1839, he came to Louisville to consult me respecting his case, when I discovered a marked varicocele of the left spermatic veins, with an increase of the constitutional and mental symptoms, and the digestive organs not acting healthfully.

I informed him that nothing short of a surgical operation promised permanent benefit; but to this he objected; and, preferring a trial of other remedies first, and promising, if they proved unsuccessful, he would return in the autumn, and submit himself to any treatment I might consider best. The remedies then prescribed were designed to correct the disordered state of the stomach and bowels, and to compress the enlarged veins; but they only succeeded in ameliorating the general and local distress, without lessening the original malady. On the 13th of October, this patient arrived in Louisville a second time; and three days thereafter I operated upon him by removing quite a large section of the entire scrotum and sub-jacent cellular tissue, in the presence of and aided by Drs. Donne and T. L. Caldwell. The part removed, which laid bare the testes, measured, when moderately stretched, 5½ by 3½ inches in extent. The wound was closed by five interrupted sutures, and interposed adhesive strips, over which was placed a light dressing of lint spread with simple cerate, and the parts placed in an elastic silk suspensory bandage, firmly drawn up. Adhesion took place throughout, with slight exception, and but little constitutional reaction occurred. The fourteenth day succeeding the operation, Mr. H. visited my office, when I could discover no evidence of varicocele. He left for home the eighteenth day after the operation. The evening before, I was happy to find, upon a careful examination of the cord, that no enlarged veins existed while he was in the erect posture, and after continuous exercise about the city; nor was he able to enlarge them by the most forcible expulsory efforts of the diaphragm and other abdominal muscles. All his previous pains, and the uneasiness of the right groin, hip, and loins, had ceased, and there remained but a slight fulness of the cord at the external abdominal ring.

ART. III. *Reduction of a Dislocated Femor by Manipulation;*—

By J. W. DICKEY, M. D., of Glasgow, Ky.

MR. M———, a healthy farmer, of middle age, in running and holding to a line, was thrown against a tree, and afterwards fell. He was taken up and found to have received severe contusion of the left leg and hip, and to be unable to walk. I saw him about twenty-four hours afterwards, and readily recognized the evidences of a dislocation of the femor upon the dorsum of the ilium, (the left leg shortened about two inches, the foot inverted, the patella of the left knee turned towards its fellow, the thigh slightly flexed upon the pelvis.) The parts about the hip were tumefied and misshapen. I at once seized the limb, and, elevating it, flexed the leg upon the thigh, and the thigh upon the pelvis. In this position, making some extension of the limb, I abducted it, and then moved it slightly but quickly from side to side, then ceasing all motion, while in this position, and using no efforts, the head of the bone passed into the socket with an audible click. Upon straightening the limb, it was found restored to its ordinary length, and the foot and knee to a natural position. Thus, without previous preparation, in a few minutes, and almost without pain, was accomplished a reduction that, by the ordinary method of extension, would have proved a formidable case.

PART THIRD.

Bi-Monthly Periscope.

ANATOMY.

Capacity of the Cranium.—The capacity of the cranial cavity of the Caucasian race, deduced from an examination of a great number of skulls by the late Dr. Morton, averages ninety cubic inches, with a maximum of one hundred and thirteen cubic inches, the latter the head of a German. The head of the late Mr. Webster, however, exceeded the maximum of Dr. Morton by nine cubic inches, measuring one hundred and twenty-two cubic inches. But even this last is surpassed by a skull in the Museum of the University of Louisville, which the author, following Dr. Morton's method, found to measure 125.77 cubic inches. It is the skull of a German baker, who, according to Professor Cobb, of the Medical College of Ohio, by whom the specimen was obtained, gave no evidence of more than ordinary intelligence, except in being able to make a tolerably good loaf of bread.

The external measurements of this remarkable skull, compared with the average results obtained by Dr. Morton, are as follows:

		Morton's average.
Occipito-frontal diameter, measured from the forehead about one inch above the nasal boss to the most prominent point of the occiput the same distance above the occipital protuberance	8¼ inches.	6¼ inches.
Bi-parietal diameter	6¼ do.	5½ do.
Vertical diameter, measured from the anterior part of the saggittal suture to the anterior edge of the occipito-spinal foramen	6¼ do.	5 do.
Circumference	23¾ do.	
Over the vertex between the centres of the auditory meatuses	14¾ do.	

Richardson's Anatomy.

SURGERY.

1. Ovariotomy.—[At the January meeting of the Cincinnati Medical Society, three cases of removal of ovarian tumors by surgical inter-

ference are reported, of which two were entirely successful. The *fortunate* operators were Prof. Blackman, of the Medical College of Ohio, and Dr. Litzenburg. Advocating as we do on all proper occasions the great benefits conferred upon surgical science and art by the detailed account of unsuccessful operations, and the duty of surgeons to render such accounts, we commend the example of the operator in the third case to those whose black list does them as little discredit, and take the liberty of transferring Dr. Fries brief report to our pages.]

"In March last he was called to see a lady who came to this city for medical advice. She then presented all the appearance of a woman at full term of utero gestation. Having, upon examination and the history of the case, satisfied himself that it was one of ovarian tumor, and one suitable for an operation, he advised accordingly: laying before the woman and her friends the dangers liable to occur. After mature consideration she decided upon having the tumor removed. Some slight preparatory treatment was ordered, consisting of aperients and light diet. During this course she was attacked with severe pain in the right side, with considerable tenderness on pressure, and with some slight pain in the back. The former, to which his attention was most particularly directed, was relieved by the application of leeches, etc.; the pain in the back, however, became more severe and alternating. Upon examination per *vaginam* a fœtus of about two and a half months was discovered, which was shortly afterwards expelled. The operation was consequently deferred for about six weeks. At the end of that time, assisted by some of his medical friends, he proceeded to operate for the extirpation of the tumor. An incision was made about ten inches in length through the linea alba. The peritoneum was found closely adherent to the walls of the sac, and, without being aware of it, both cavities were opened at once, allowing a large quantity of fluid to escape. The adhesions extended the whole length of the incision, and supposing the same condition to exist throughout the whole extent, it was thought advisable to evacuate the fluid and allow the sac to remain, and depend upon injections to prevent a re-accumulation of the fluid: the wound was accordingly closed. Six days afterwards the tumor was found to be filling rapidly, and on the tenth was nearly as large as before the operation. Nausea was exceedingly troublesome. The next day the cicatrix burst open and a discharge, most fœtid, flowed from the wound. The sac was again emptied and closed, and injections of nitrate of silver were used for three or four days. Diarrhœa set in with nausea, which nothing seemed to allay. Various other injections were tried without avail; finally extirpation of the sac was determined upon, which was accomplished without much difficulty, the adhesions extending over about one-half the surface and easily detached. The pedicle was allowed to remain within the cavity of the peritoneum attached to the ligatures passing through the lowest point of the incision. The wound was again closed, but no adhesions took place; the nausea and diarrhea continued, and death closed the scene seven days after the removal of the tumor. He considers the great error in this case was in not completing the operation at first, when, he has no doubt, it would have been successful. No man should be deterred from completing an operation of this kind when commenced, no matter what may be the opinions of those around."

2. SUCCESSFUL REMOVAL OF A FIBROUS TUMOR OF THE UTERUS BY THE ABDOMINAL SECTION;—by *Dr. Herff*, of San Antonio, Texas. Mrs. Ring, of Port Lavacca, aged 43, twenty years ago perceived a tumor in the abdomen, which increased slowly, and for a long time caused her no considerable suffering or any derangements of the urino-genital functions. She had during the time several living children, as well as a number of miscarriages. During the last few years, however, she suffered much from pressure upon the rectum and bladder, as well as prolapsus uteri. Menstruation became scanty and fluor albus very troublesome. She had at no time dysmenorrhœa neuralgia, or menorrhagia. In the fall of 1852, after lifting a heavy burden, she felt as if something in her abdomen had given way; after which she was laid up for a week or two, with severe pains in the abdomen, accompanied with fever. From that time she suffered almost constantly with great pain in the region of the tumor, over which, about four months before her application to Dr. Herff, several small abscesses appeared. She had suffered during that time from hectic, night sweats, diarrhea, and was so far reduced as to be unable to stand alone.

Present Condition.—The abdomen was enlarged from the navel to the os pubis, to about the size of one in the sixth month of gestation; the enlargement, however, was not in the mesian planis, but more to the left side. The tumor was slightly movable laterally, and adherent to the abdominal walls, which were thin from extreme emaciation. The fistulous openings were three in number on the left side of the linea alba, and admitted the probe to the depth of no more than one-fourth of an inch, from their small size and sinuous course; the discharge from them was sero-purulent. The vagina was much relaxed, the cervix uteri inclined to the right side, and very low down, and the os very sensitive. The use of the uterine probe was objected to by the patient. The female catheter entered without difficulty into the bladder. The finger introduced into the vagina and rectum could readily feel the tumor through the walls and spatium Douglassii.

Diagnosis.— Encysted tumor of the left ovarium with inflamed internal membrane of cyst; adhesions to the peritoneum; suppuration, and perforation of the abdominal walls.

The diagnosis was chiefly founded on the improbability of the patient's having children, with such a tumor in the womb; on the lateral position; slow growth; and perforation of the surface. Dr. Herff thought that had he been permitted to use the uterine probe, he would have immediately discovered the connection of the tumor with the uterus itself. The patient insisted upon an operation, and was full of confidence in its success. His intention was to make a small incision in the supposed cyst, to empty it of its contents, and then to pull out the cyst itself without opening into the abdominal cavity, and remove it with the knife or ligature.

The operation was performed in the presence of Drs. Scholeman, Morgan, and Wette, of San Antonio, the husband, and some friends of the patient, on the 12th of August, 1854. The patient was put under the full effects of chloroform, and a small incision made in the linea alba. The incision led to a firm tumor which had a somewhat bony feel. The peritoneum was adherent to the whole anterior part of the tumor, and only separable with difficulty from it. The incision was enlarged to the length of five inches, by which means the doctor could introduce his hand behind the tumor, and free it from all its adhesions. It now appeared that the tumor originated in the substance of the uterus, which was enlarged to the size of a child's head at birth. There were two or three pseudo-membranaceous connections with the mesenterium of the colon, which were separated with the scissors. The tumor was detached from the uterus by the scalpel-handle and fingers. Very little hemorrhage followed, but a cavity was left in the body of the uterus large enough to admit the fist, but it did not open into the cavity of the uterus; it did not close by contraction as wounds in that organ are accustomed to do, after the Cæsarian operation, and into which the bowels would have inevitably fallen. It became necessary, therefore, to stitch the wound in the uterus with four strong sutures of silk, which were let out at the lower angle of the abdominal wound. The latter was closed by twelve sutures and alternate strips of adhesive plaster. The time occupied was forty minutes, during which time the patient was kept under the influence of chloroform.

The tumor was nearly round, four inches in diameter, of a very hard, fibrous structure, without any elements of muscular fibre. The portion connected with the peritoneum was covered with lamina of phosphate of lime, the twentieth of an inch in thickness, and bearing a close resemblance to spiculæ of bone. Weight of tumor four pounds and three ounces.

After the operation, the patient complaining of severe pain in the abdomen, ½ gr. morph. was administered. Cataplasms of slippery elm were kept upon the abdomen for three days. No other nourishment was allowed than rice water. During the first twenty-four hours the patient was kept under the influence of opium, of which she took one grain every three hours. The second day she had no fever or pain. In the evening one grain of opium. On the third day there was administered of oleum ricini ½oz, by which a natural evacuation was obtained. On the fourth day the cataplasms were discontinued, and a part of the stitches removed on the fifth day. The abdominal wound was entirely healed, except the lower corner, which was kept open by the passage of the ligatures of the uterus. Four weeks after the operation these threads were withdrawn by the assistance of a small exploring trochar, through which the threads were passed, and traction made upon them, pushing at same time with the trochar, to confine the traction to the point of attachment with the ligature.

Five weeks after the operation the patient left in the mail coach for her home, a journey of forty-eight hours. She has been since then, a period of fifteen months, in good health, and is now superintending a large hotel, and only suffers from a hernia in the linea alba, which is easily kept back by an elastic bandage.

[The interest which Ovariotomy and kindred operations have excited for some years past, and the discussions which they have elicited, give to this case of Dr. Herff's a value extraordinary, even among the extraordinary operations with which it is classed.

In Ovariotomy it has been usual to make a preliminary exploratory operation, and when a solid tumour has been found to desist from its performance. Up to 1844, every attempt at their removal, six in number, proved fatal. Our countryman, Dr. Atlee, of Philadelphia, has the credit of performing the first successful removal of a tumor attached to the fundus of the uterus, in which the patient recovered.

This was a pedicular tumor, and the pedicle was first ligated before excision. He operated again successfully in 1849 for the removal of a tumor of similar character, and probably in the same manner, though the details of the case are not published.*

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* See *Atlee's Analysis of cases of Ovariotomy*, in the Transactions of the American Medical Association, vol. iv.

Dr. Herff's is the third case, and this in some respects is unique. Enlarged uterus and adhesions were both present, and the sessile attachment of the tumor precluded the use of ligatures previous to removal, and he dissected it away without the knife. It may be well for me to state that Dr. Herff is a Russian by birth, but now a citizen of the United States, and resident for six years past in the city of San Antonio, Texas, where he is held in the highest esteem by gentlemen of the profession and the public, and has gained for himself a surgical reputation second to none in the State. The successful result of this case must be ascribed in no small degree to the extraordinary salubrity of the climate, which is such as to give a larger average of recoveries, Dr. H. tells me, than is usual in more humid climates.—*New York Journal of Medicine.*]

3. A BONE LODGED IN THE RECTUM SIMULATING DYSENTERY;—by *Dr. J. C. Billingslea*, of Tuscaloosa Co., Ala. About the 20th of November, 1854, while living in Henderson, Texas, I was called by Mr. S., to see a man servant of his, æt. about 50 years. On my arrival, I was informed that the man had been complaining for two days, of *sharp, cutting* pains in the bowels, and that he had taken a blue pill the first night, and subsequently oleum ricini, which operated on his bowels without relieving the pain. He then alternately administered anodynes and cathartics, with no better success. From the patient, that morning, complaining of so much pain in the rectum, with a frequent disposition to go to stool, his master was fearful he was taking dysentery, as it then prevailed there. Upon examining the patient, I found the skin hot and dry, the pulse considerably accelerated, bowels rather tender; the recti abdominis muscles rigid, and the tongue foul, with red end and edges, though moist; and great thirst. I was at first about to prescribe as if it were a case of dysentery; but not being satisfied, and as he complained of so much pain about the anus, I determined upon an examination, and having placed him upon his hands and knees, I immediately saw something projecting from the anus, which I discovered to be a bone. I interrogated him as to what he had eaten, in order to arrive at the species of bone, but could get no satisfaction. The projecting part was flat, and the bone seemed, what it afterwards proved to be, of triangular shape—the base being upward and the apex presenting. On seizing it with the forceps and using slight forces, he complained loudly and trembled violently. I administered a large anodyne, but still he was no more quiet. The bone seemed to be *bearded*, and pulling at it only seemed to fasten it tighter. I then determined to use a speculum ani, for dilating the sphincter, so as to disengage the bone;

but he would not allow me to introduce the instrument, as it gave great pain. I then administered chloroform by inhalation until he was *intoxicated*, and readily introduced the speculum on each side of the bone, and by dilating the parts largely, I saw a flat triangular bone, each line of the triangle being about 1¾ inches long. It being still engaged in the mucous membrane, I attempted to cut it with a strong pair of scissors, but could not. I then gradually worked it out with difficulty, and some pain; considerable hemorrhage followed for an instant. The patient expressed great relief. I cleansed the parts, then administered full doses of opium for twenty-four hours, not allowing any passages for forty-eight hours. He was up and at work at the end of that time, and had suffered no bad effects when I left there, two months thereafter.

The bone proved to be a fish-bone—the fin of a large cat-fish; the point presenting was thin, while one corner of the articulating surface was engaged in the mucous membrane, rendering it hard to extricate.

Remark.—This case is not a novel one, as foreign bodies are frequently swallowed and lodged at the anus. Yet I have been thus particular in describing the symptons, to show how easily a physician may be deceived in a case, and that he should be *minute* in his examination, or his *reputation*, as well as his patient, may suffer.—*Southern Med. and Surg. Journal.*

4. CASE RESULTING FROM THE BITE OF A HORSE AFFECTED WITH GLANDERS;—by *T. L. Neal*, M. D., of Sidney, Ohio. Geo. B., blacksmith, age 30, robust and of good habits, was bitten April 4th, 1855, on the left forearm by a horse diseased with glanders. The wound was considered of little importance at the time, as it did not keep him from business. It began, however, in the course of a week or ten days to be painful, swelled considerably, and discharged an excoriating dirty pus. Nothing further developing, the wound was simply poulticed, and rest enjoined. The discharging surface of the wound which was about the size of a quarter-dollar, continued of nearly the same size throughout the disease. It presented a purple granular surface, an irregular margin, and proved to be remarkably indolent, for at no time did it show any signs of healing. There did not appear to be much constitutional disturbance until about the first of June, when the peculiar local symptoms first manifested themselves. The nostrils became red, painful, and considerably swollen. The discharge which was only moderate in quantity, was a yellow viscid mucus. The swelling extended in a slight degree to both eyelids.

These symptoms subsided in a few days, and were never afterwards a source of trouble. But concomitant with their appearance there was general restlessness, considerable fever, headache and cough: and a feeling of extreme exhaustion was much complained of. The immediate tissues about the wound began to swell and harden by infiltration until they acquired the size of an orange; at the same time tumors of different sizes—varying from a quail's to a goose's egg—made their appearance in different parts of the body. There was not much change in the disease until about the middle of the following month, when the fever, hitherto of a rather mild and regular type asssumed an irregular paroxysmal turn. The tumors, which were painless before, became during the exacerbation of fever the seat of violent pain; yet, what was very singular, the intermissions which sometimes lasted thirty hours, left them entirely free from pain. The largest one only suppurated.

The cough, somewhat harrassing at first, gradually disappeared. The appetite, never good, was at times turned to loathing; constipation was a marked symptom. There was nothing observable peculiar in the secretion from the kidneys save a scantiness. The skin was generally dry and harsh, although the paroxysms of fever were towards the close followed by copious sweats. A peculiar exhalation from the surface was observed, which I must fail in describing, having never met anything to compare it with; the odor was rank and disagreeable. The foregoing general condition of things continued without much variation until near the termination of the complaint, when the powers of life—after battling with the malady for more than six months, yielded to hectic, which was superinduced. This would be a tedious article should I attempt to give the treatment in detail, and shall content myself by stating the outlines. The prolonged continuance of the case gave ample opportunity for the adoption of several plans of treatment, most of which were sedulously adhered to; but unfortunately to no purpose. Brisk purgatives with the occasional use of emetics were at first thought to be doing the patient some good. Iodine and iodide of potassium were then tried. Strychnia was afterwards administered until its constitutional effects were produced; next the various tonics, some of which were Fowler's solution, quinia, the mineral acids, etc.

At the suggestion of Prof. Mussey the patient had a fair trial with the mur. ammonia. In fact almost everything thought to be rational, expectant, and empirical had each their turn. It may be stated in conclusion that it was found necessary to give the patient large doses of opiates to allay the almost excruciating agony during the paroxysms of fever.

5. MATHYSEN'S GYPSUM BANDAGES.—At Charity Hospital, these are prepared by rubbing powdered plaster of paris on both sides of the bandage, and then rolling it up ready for use. Immediately before using, it is dipped in water. The plaster *sets* in a short time, making a firm and unyielding casing for a broken limb. In some European hospitals, this is preferred to the starch bandage as hardening more rapidly, being easily removed by wetting, better suited to oblique fractures because of its greater firmness; the ease with which it can be borne; its porosity facilitating cutaneous transpiration; its being a better conductor of heat facilitating the powers of refrigeration; being more easily applied, and as showing better the form of the limb.—*Memphis Medical Recorder, page* 311.

6. NON-CONGENITAL TALIPES;—by *L.A.Dugas, M. D.*, of Augusta, Ga. The subject of the present case is a daughter of Mr. B., of Lithonia, in this State: she was born in March, 1851, and in November, 1853 was attacked with Erysipelas, with which she was very ill, and remained feeble for some length of time. I am informed that she had no spasmodic affection during or subsequently to her illness; but it was observed, when she began to run about again, that she was lame. This lameness gradually increasing, its cause was observed to be in the foot, whose distortion grew more and more obvious until I saw her, in August, 1854. The case then presented all the peculiarities of a well-marked Talipes varus, the weight of the body resting upon the external margin of the foot; only one being effected.

By a sub-cutaneous incision the tendo-Achillis was divided in the usual way, and a few days after, Dr. Chase's very simple and useful apparatus was applied for the purpose of gradually bringing the toes upwards and outwards. This succeeded admirably, and in a few weeks she was enabled to walk flat-footed.

It is difficult to account for the production of such a deformity by an attack of erysipelas; yet, as the cause of these distortions, whether congenital or otherwise, is still involved in obscurity, it is well to accumulate facts on the subject. This is the fourth case of *non-congenital* talipes I have met in private practice. The others have been reported in this Journal for 1853, p. 142, and 1854, p. 210.—*Southern Med. and Surg. Journal.*

PRACTICAL MEDICINE.

1. CHLOROFORM IN INTERMITTENT FEVER;—by *Dr. N. Dalton*, of Logan, Ohio.—Some time in September last, I visited a young athletic man, laboring under an intermittent, with general visceral congestion,

which seemed to menace his life. I was convinced he must die, unless he was speedily relieved. For promptitude, I was induced to try the internal use of chloroform, and gave him about two drachms, with a half gr. sulph. morphine. In a few seconds, he fell asleep, and slept soundly. His pulse, which could not be felt at the wrist, came up to about ninety, full and soft, and, when he awoke, to my astonishment, expressed himself perfectly well. All the unpleasant symptoms had given way, nor was the cold stage followed by any feverish reaction. This all occurred in less than an hour. I was so much pleased with its effects that I concluded to test its anti-periodic properties by risking the probability of its return. From four to five weeks elapsed before it did return, during which time, and since, I have given it in the cold stage of quite a number of cases of simple intermittent, in doses varying from one to two drachms, in a little camphor water, both alone and combined with the morphine, and in every case have had the pleasure of witnessing the same prompt arrest of the disease; and in but two cases has there been any return of the ague, and in one only has there been any feverish reaction; but all are instantly arrested. I mentioned the matter to my partner, Dr. Hoffman, who has used the chloroform in a number of cases with the same happy results; also, to Dr. Pullen, who tried it on himself, with the effect of immediately arresting the chill, leaving him to feel as well as usual after an intermittent attack; but, being fearful of its anti-periodic properties, took from two to three grains of quinine the next day, and has not had a return of the ague since.

I will report more fully as soon as I can get time, possibly during the coming month. In the meantime, I hope you will lay this before your readers in some shape, that it may be more generally tried. If found to be as serviceable in the hands of others as in ours, it will be of incalculable benefit, both in relieving human suffering, and in a monetary point of view. Should it, on the other hand, serve no other purpose than promptly to arrest those alarming and so frequently fatal congestive chills, it will do much good.—*Ohio Med. and Surg. Journal.*

2. A NEW MODE OF EXPLORATION BY THE SIMULTANEOUS EMPLOYMENT OF PERCUSSION AND AUSCULTATION. Although but little practice is required to recognize, by the different degrees of sonoriety, intensity, and tone, the situation of the internal organs, and the marked changes which may occur in them, yet, to distinguish changes of function or structure, which occasion but very slight modifications of the normal sounds, the highest cultivation of the ear is essential. The means hitherto employed have not always enabled the most expert and expe-

rienced to detect the existence of internal changes. A very simple procedure, which, surprisingly, has not suggested itself before, has been recently proposed by an American physician, at present at Honolulu, on one of the Sandwich Islands.

Two persons are required to practice this mode of observation. One percusses whilst the other applies the stethoscope to the vicinity of the spot percussed. While he who percusses distinguishes only the coarse sounds, and the broad differences of sonoriety; to the ear of the auscultator is conveyed the faintest sounds and vibrations, with their minutest shades of variation. Dr. O'Rorke, who reports this method, in *La Lancette Francaise*, thinks that it will become exceedingly easy to trace, by its means, the exact limits of the heart, the liver, the different portions of the intestines, the course of the great vessels, and to ascertain the presence of liquids and gases in the internal cavities. The fingers were used to percuss in these trials, but any substance may serve equally well as a pleximiter. The stethoscope is directed to be placed, according to the case, more or less near the spot percussed.

The only objection which can be urged against this method of exploration seems to be the necessity of having an assistant; but, as it will only be occasionally requisite to resort to this rigorous mode of investigation, it may not be found generally inconvenient.—*Charleston Medical Journal and Review.*

3. Quinine in Hooping-Cough.—In some parts of Europe, after treating the preliminary stage of hooping cough with emetics of ipecacuanha, emollients, and revulsives, quinine is generally relied on to complete the cure. It is given immediately after the fit, in order to give time for the remedy to act before the succeeding paroxysm. Other remedies commonly employed, such as belladonna, assafœtida, sulphuret of potassium, coffee, cochineal, &c., do not seem to aid the curative action of quinine. All this may be received as evidence of the existence of periodicity in connection with the disease thus treated, which is often the case, doubtless, in this country, also.—*Memphis Medical Recorder.*

4. The Treatment of Hæmoptysis;—by *M. Aran.* M. Aran agrees with those who entirely condemn the employment of blood-letting in the treatment of hæmoptysis, as it only temporarily arrests the bleeding, while it is dangerous, owing to the debility and increased susceptibility to the intercurrent affections it gives rise to. He has, for some time past, been engaged in testing the efficacy of the various hæmostatic agents employed in hæmoptysis; and in this paper he gives the

results of his observations. He considers the essence of turpentine a most valuable remedy, gives it in doses of from 10 to 30 drops every hour, either in a spoonful of water, or mixed up with magnesia as a bolus. Marked amendment usually occurs in a few hours, and in from twenty-four to thirty-six hours the bleeding ceases. It is less suitable for young or plethoric subjects, with febrile action, than in weak, cachectic individuals, exhibiting atonic characteristics. Ergot of rye and ergotine are far less efficacious; but chloride of sodium, given in doses of 1 to 2½ drachms, proves very efficacious in some cases, and has the advantage of being always at hand. Among the astringents, tannin, and especially gallic acid, are to be recommended; the latter, while quite as efficacious, does not exert the same desiccating effect upon the tissues, or induce the obstinate constipation produced by tannin. As a mean dose, M. Aran gives 15 centigrammes (a centigramme is $\frac{1}{7}$ grain) every hour or alternate hour. He has had little experience in the use of emetic and nauseating remedies; but, in three cases in which veratrine was employed, the bleeding ceased as if by enchantment. This class of remedies, indeed, would deserve to stand in the first class of hæmostatic agents, were there not others possessing like efficacy, and yet not giving rise to the painful nausea these produce. M. Aran has derived great advantage from the combined use of digitalis and nitre. In ordinary cases, he gives, in the twenty-four hours, 30 centigrammes of digitalis, and 1½ gramme (a gramme is 15 grains) of nitre, divided into four doses; but, in very severe cases, these doses may be very much increased, so that the digitalis has been given to the extent of 1½ gramme, and the nitre to 4 grammes, without injuriously affecting the action of the heart, while the effect produced on the hemorrhage has been remarkable. Its arrest, never, however, takes place so suddenly under the use of these medicines, as when turpentine or gallic acid is employed.

In abundant but not immediately dangerous hemorrhage, we can choose among any of the above-mentioned means. In extremely abundant hemorrhage, we must arrest the flow as speedily as possible, by agents which do not depress the powers of the economy too much, and which are not too slow in their operation. Neither ergot, acetate of lead, nor alum is sufficient to meet the danger. Turpentine, gallic acid, chloride of sodium, or nitre with digitalis, can alone be trusted; but the necessity of increasing the dose with the intensity of the hemorrhage may perhaps render the chloride of sodium, and especially the nitre and digitalis, dangerous, through the possibility of a production of a too great depression of the heart's action. It is, therefore to gallic acid or turpentine that we must chiefly trust in these severe cases; and we must not limit ourselves to their employment, but also endeavor to procure a temporary arrest of the hemorrhage by ligatures to the limbs, and the application of ice to the chest, allowing the means employed internally to consolidate this temporary cure.—*Med. Times & Gaz., Jan.*, 1856, *from Gaz. Hop.*, 1855.

5. OF THE EMPLOYMENT OF BORAX BY INJECTIONS IN THE DIARRHŒA OF CHILDREN;—by *M. Bouchut.* It is well known how difficult it sometimes is to check certain forms of diarrhœa in young children, during the period of their first dentition. Two kinds of diarrhœa are met with amongst children at this age, the one symptomatic of organic disease of the intestinal mucous membrane, the other an idiopathic affection, catarrhal in its nature, sometimes proving fatal, yet leaving behind no appreciable lesion. In this last complaint it is that the *lavements* of borax recommended by M. Bouchut are so successful. The beneficial action of this remedy on the mucous membrane of the large intestine, is regarded by M. Bouchut as analogous to the good effects of borax on the mucous membrane of the mouth, especially in apthous affections. Borax has this advantage over other salts generally used in injections: in such cases it does not decompose in the syringe, it is not irritating, and it is alkaline. The following is the formula for the alkaline *lavement:*

Borax, drs. iv. to drs. vi.
Sugar and water, oz. vi.

If a larger quantity of borax be administered, it is necessary to increase the quantity of fluid, since the borax is not very soluble. M. Bouchut has used this salt in other intestinal maladies, as ulceration, but his cases are not sufficiently numerous to be conclusive.—*Dublin Hospital Gazette.*

6. IODINE IN ASTHMA, BRONCHITIS, &c.—Inquiry has been made in several journals, as to the mode of operation of iodine and iodide of potassium, in relieving asthma, bronchitis, croup, &c. Decided relief of urgent symptoms has been obtained by the exhibition of a single dose, and in half an hour; which would appear to be too soon for its producing an effect upon the general system. We venture to suggest that its remedial power is mainly due to its action upon the throat in the act of swallowing the medicine; and we do so because we have been for several years in the habit of using iodine for these diseases as a local application. For the different forms of pharyngitis, catarrh in the head, ozena, croup, bronchitis, asthma, &c., we prescribe some

form of iodine as a local application to the throat, the posterior nares and the bronchi. When the principal difficulty lies in the throat, within reach of a brush, we use Lugols' solution of iodine, the acrimony of which is obtunded by gum and sugar, or by making the solution in simple syrup, instead of water, and applying it with a brush. But in case the disease is principally seated in the bronchial tubes, the larynx, or the posterior nares, we use iodine inhalations. A small bit of cane, about five or six inches long, is charged with a few grains of iodine, and fine wool is inserted in each end, just enough to prevent the iodine from falling out. Free inhalations are made through this tube to relieve irritation in the air passages, and when it is necessary to apply the fumigations to the posterior nares, they are either expired through the nose, or the tube may be inserted within the nostril. This is a convenient instrument, easily prepared by any one, and may be always at hand ready for use.

On account of the greater success which has attended upon our application of iodine to the relief of certain diseases of the air passages, than upon the use of nitrate of silver, we were induced to try the experiment of passing a probang, armed with an iodine solution, into the larynx. We failed to accomplish the object, and attributed the want of success to our own bungling manipulations, until the discussions of the New York Academy of Medicine afforded us some relief from our dilemma, by its reports and discussions. It would appear now to be so difficult a matter, that no one need indulge in self-reproaches on account of failure. Dr. Gluck, of New York, however, thinks he has discovered a certain method of operating, which he describes thus: "I introduce the right index and middle finger, previously wet, together with the tube, (commonly No. 7,) convex in its middle part, and placed between the two fingers along the back of the hand, with its concavity towards the back of the hand, and projecting a little below the tips of the fingers, into the glottis, and lifting and bringing backwards towards the root of the tongue, and pushing the tube with the left hand, (previously held on the occiput to support the head,) into the larynx, I quickly withdraw the fingers and remove the wire, (which is somewhat shorter than the tube,) and push it further down in the trachea, in order to make the injection. I have succeeded in introducing the tube and probang in this way in all instances where I could reach the epiglottis, which can be felt perfectly by those who have long fingers." Even if this can be accomplished, with all the facility here indicated, it may be doubted whether injections into the bronchial tubes is in any case to be preferred to inhalations.—*Memphis Medical Recorder.*

7. TREATMENT OF DYSENTERY; by *W. A. Rawlings, M. D.*, of Huntsville, Texas. Dysentery has been the prevailing disease of a malignant character among us during the spring, summer, and fall months of the present year. When we consult our medical works upon the subject, we would naturally conclude, from what has been published in regard to the disease in question, that nothing more could, with propriety, be offered to the profession. But this is an age of investigation and advancement in medicine as in all other knowledge; old things are done away, and new things are reared in their stead. While all this is true, I am not to be understood as starting out, in this short article, with a view of offering anything new, but rather to collect, in a condensed form, our practical experience in the treatment of this frightful disease. In using the plural pronoun, I have reference to my partner, Dr. M. Davenport.

During the prevailing epidemic, (for such we regard it,) we found in individual cases the type to differ, and hence our treatment accordingly. When we found our patient with fever, dry skin, and a furred tongue, giving evidence of deranged hepatic secretion, we administered some of the mild preparations of mercury, either the blue pill or Hyd. cum creta to an adult, after the following formula:

Recipe:—Blue Pill, 10 grs.
Pulv. Opii., 2 grs.

Divide into two pills, to be given at intervals of two hours, this to be followed, in fifteen or twenty hours, with castor oil and spirits of turpentine, in doses sufficient to produce free discharges from the stomach and bowels of bilious and fecal matter. These were our preliminary steps, after which opium was our main stay:

Recipe:—Pulv. Opium, 30 grs.

Pills, 15, one every two hours; enema of pulverized opium and thick starch after every operation of a dysenteric character. Enjoined rest, quietude, and cleanliness. Astringent poultices or warm fomentations to the abdomen. From this on, all mercurials were withheld from the patient, believing them, as we did, to be inadmissible. Opium, in connection with the vegetable and mineral astringents usually recommended in the disease, was relied upon, correcting other symptoms as they occurred, such as nausea, vomiting, and acidity, and evacuating the ailmentary canal of its fecal accumulations by the administration of oil and turpentine.

As soon as we found an improvement in the patient, which was indicated by an arrest of the fever, soft and compressible pulse, pleasant skin, and stoppage of the violent tormina and tenesmus, and mucous and bloody discharges, we resorted to quinine and camphor:

Recipe:—Sulp. Quinine, 20 grs.
Powd. Camphor, 30 grs.

Pills, 20; one every two hours; in the meantime holding in check the bowels with opium or some of its preparations.

When we met with a patient in whom the hepatic secretions were normal, but attacked with all the symptoms usually characterizing the disease, we pursued the same plan of treatment as heretofore given. with the exception of the mercury; *this we laid aside.*

The disease in many of our patients lingered, thereby assuming a typhoid type. To all such cases, (at intervals of five hours,) we administered spirits turpentine in mucilage, as a styptic to the mucous membrane of the bowels, in doses of four or five drops.

We have passed through the epidemic, and of the number we have treated, we lost but three—two infants, one eleven and the other fourteen months of age, and a little boy six years of age.

In concluding this article, we have but to add, from our observation and practical experience in the treatment of dysentery, we feel warranted in saying that it cannot be treated in the aggregate successfully without the use of opium, or its preparations, to the extent that the patient can bear. And it is really astonishing how much of this powerful drug can be given to a dysenteric patient without producing the least narcotic effect upon the system. We are fully persuaded in our minds that opium is the only reliable remedy in the treatment of epidemic dysentery; its like cannot be found in any known remedy. Opium first, opium last, opium all the time; for, rest assured, it is the only beacon light the practitioner has to guide him through the ravages of one among the most violent and fearful epidemic diseases to which the human family is subject, and which has swept its thousands to an untimely grave.

Recapitulation.—If the patient is bilious, a little blue mass may, with propriety, be given, followed, in fifteen or twenty hours, by oil and turpentine, as preliminary steps. Then rely upon opium, given by the mouth and in form of enema, to the extent the patient can bear it without the risk of narcotism.

When deemed necessary, oil and turpentine must be given to evacuate the alimentary canal of the fecal accumulations during the continuation of the disease. Chalk as an antacid, spirits turpentine as a styptic, astringent or stimulating poultices, or warm fomentations to the abdomen. Pure air, perfect rest, quietude, cleanliness, diet light and astringent; quinine, opium, and camphor, as a tonic and sedative; good nursing and close attention on the part of the physician, possessed of some discrimination in withholding and applying his remedies according to symptoms. If this treatment fails to be successful in dysentery, we hope some good brother will give us the benefit of a better, for we must acknowledge we are not in possession of it. As to free use of mercury, blisters, and sulp. magnesia, we have no earthly confidence in such a course, and, in fact, but little in any apart from opium.—*Nashville Journal of Medicine and Surgery.*

OBSTETRICS.

1. CURATIVE TREATMENT OF PROLAPSUS UTERI BY THE LOCAL APPLICATION OF TANNIN;—by *Chas. A. Budd*, M. D. The many and varied forms of uterine disease resulting from an injudicious use of pessaries, as well as the irreparable damage done by means of cauteries, either actual or potential, or by extirpation of portions of mucous membranes, which have for their object the diminution of the capacity of the vagina with a view of curing prolapsus, have led me to add my testimony in favor of a practice first recommended by Prof. B. F. Barker, of this city. I allude to the application of lint soaked in a saturated solution of tannin; and if the perusal of the following cases, selected from a variety which have come under my observation, will induce a trial of the treatment alluded to, I feel confident that in all cases to which it is applicable, the result will be equally gratifying. There are, to be sure, certain abnormal conditions in which it is not applicable, as, for example, a very straight sacrum, or a loss of substance in the perineum due to laceration or other causes; or if there be any pathological condition of the cervix, it must be removed by appropriate treatment; and then, if the prolapsus continue. the utility, I may say infallibility, of the method alluded to, becomes apparent. But in simple cases of prolapsus, whether incipient, partial, or complete. depending upon a mere relaxation of the uterine supports, I have never known it to fail where the treatment has been faithfully persevered in. The manner recommended by Prof. B., and the one I have followed, in its principal details, is as follows:—From a double thickness of lint a triangular portion is cut out, of a sufficient size to fill the capacity of the vagina when rolled up so as to form a cone, near the apex of which is attached a piece of string to facilitate withdrawal. The patient being

placed upon her back, with the hips slightly elevated, the uterus is replaced in situ, and the lint soaked in a saturated solution of tannin, is applied with its apex downward and its base immediately in contact with the os tincæ. This is repeated once in twenty-four hours, for a period of time in accordance with the extent of the displacement. I have usually found daily application for a period of about a month, to be sufficient to perfect a cure. During this time, and subsequently, constipation must be rigidly guarded against, and the state of the general health attended to. The vagina soon begins to acquire its wonted tonicity and contractility, and the lint is consequently obliged gradually to be lessened in quantity; the strain being taken off the round ligaments, also allows them to return to their normal condition. —*New York Med. Times.*

2. RUPTURE OF THE UTERUS AND RECOVERY. [Dr. Hawley read the following interesting case before the Buffalo Medical Association.] Nov. 11, 1855, at 12½, at night. Patient a strong, rather fat, English woman, from 25 to 30 years of age, in her fifth labor, in charge of a midwife. Labor commenced at 7 o'clock in the evening, and the pains were severe from 9 o'clock. The head of the child, the face presenting anteriorly, was fully engaged in the pelvis; scalp much tumefied and the parts of the mother much swollen; the water, also, had been discharged. Pulse 81.

The patient stated that her previous labors had been short, the last occupying but two hours. She complained much of the severity of the pains, and expressed her fears that the child could not be delivered. There being nothing to distinguish it from other cases of severe labor. I determined to wait its progress. At about 2 o'clock, finding no progress made, I yielded to the desire of the patient and sent for forceps. Soon after, during the absence of the messenger, the patient complained of a severe and unusual pain at the epigastrium; this recurred at each successive throe. Not being able to relieve or account for this new symptom, I withdrew to an adjoining room, but was soon recalled to the bedside by a cry of anguish more intense than the preceding. The patient was alarmed, and declared herself suffering horrible pain at the epigastrium: considerable tympanitis existed at that place. Labor had entirely ceased, and a vaginal examination disclosed that the head of the child had receded and was lying loose in the pelvis, and a bloody fluid flowed from the passage. The motions of the child were for a short time violent, giving great pain to the mother, which she referred to the epigastric region. Vomiting of a dark offensive fluid occurred at this time; pulse 100. These symptoms I regarded as evidence of rupture of the uterus.

On the return of the messenger I immediately applied the forceps, and dispatched another messenger for counsel. I had brought the head fully into the lower strait, when one blade of the forceps warped, and the instrument slipped off and left the head to recede again. I now introduced the hand for the purpose of turning, but finding a membrane interposing between it and the feet, and believing them to have escaped from the uterus, abandoned the effort and awaited the arrival of Dr. White, at 4½, A. M. After an examination of the patient, it was deemed best to resort to the forceps again. The child was delivered at about 5 o'clock. Pulse 112.

Administered 1½ or 2 grains of opium shortly before the delivery, and the same quantity soon after, to be repeated every two hours. The patient was bandaged, and left with the strictest injunctions to keep quiet.

Nov. 12, 9½, A. M. Pulse 120; tympanitis extensive.

12½, P. M. Pulse 140; pain in the right hypochondrium, very severe, and extending to the spine.

5 o'clock, P. M. Pulse 132; pain diminished; tympanitis unaltered.

Applied bran poultice to the abdomen and continued the opium.

Nov. 13, 8½, A. M. Had slept at intervals during the night; is free from pain; other symptoms unchanged. During the preceding twenty-four hours she had taken 20 grains of opium, ice and ice water in small quanities frequently repeated, but no food.

Continue opium every three hours, and give chicken broth.

12½ P. M. Half an hour before, a little chicken broth had been followed by vomiting, and at the time of my arrival she was suffering severe pains in the abdomen.

Discontinued the opium and gave 15 drops of laudanum in vinegar, every hour, until the pain ceased, and then every two hours, and applied warm fomentations of hops over the abdomen.

5, P. Pain relieved; pulse 132; tympanitis diminished.

Continue the laudanum and the fomentation at intervals through the night; no food.

Nov. 14, 7, A. M. Pulse 120; tympanitis diminished.

Discontinue the opiate on account of nausea; crust coffee for nourishment.

2, P. M. Pulse 112; tympanitis and tenderness diminishing.

7, P. M. Pulse 100; has complained much of pain in the hypogastric region.

Gave an occasional powder of opium and applied fomentations.

Nov. 15, 8 A. M. Pulse 88; tympanitis and tenderness still diminishing; has suffered from pain since 12 at night.

5, P. M. Symptoms unaltered. Prescribed cathartic.

Nov. 16, 9, A. M. Bowels have moved freely; pains much diminished; abdomen soft; pulse 92; some appetite, and stomach tolerant of food; tenderness and some pain in the right hypochondriac and hypogastric regions.

Recipe:—Laudanum gtt. x, every two hours.

5. P. M. Pulse 96; tongue furred; pain in hypogastrium.

Continue laudanum.

Nov. 17, 9½, A. M. Pulse 112; fur on the tongue increased; has suffered much pain all night.

Give 1¼ grs. opium every two hours, till pain is relieved; beef tea for nourishment.

From this time she improved steadily until the 21st, when she was dismissed from treatment. The urine was drawn off by the catheter during the whole illness. On the 20th of last month the menses returned, and the patient seemed restored to her usual health.—*Buffalo Med. Journal.*

3. TINCTURE OF BENZOIN IN CHAPPED NIPPLES.—M. Bourdel states this is the best application, whatever the extent or duration of the fissure may be. After suckling, it should be freely applied with a pencil. The first application causes a burning pain for a quarter of an hour, which, however, is usually bearable, and future applications give relief instead of pain. It need not be wiped off before the infant sucks. —*Journal de Chemie Médicale.—Med. Times and Gazette.*

4. CASE OF DOUBLE WOMB; BOTH IMPREGNATED;—by *Dr. I. T. Kannon*, of Mississippi. On the 28th of December, 1853, I was called in consultation by Drs. Horton and Montgomery, in the case of Mrs.——, who had been delivered of a child early that morning. There were still all the appearances of another child remaining, though the womb was entirely empty, and the placenta had come away. Owing to great prostration consequent upon the birth of the child, and the womb being empty, it was very natural to suppose that laceration had occurred, and the fœtus had escaped into the cavity of the abdomen.

On making an examination, I passed my hand into the empty womb, and found its walls solid, not the least appearance of a rupture having occurred. The probability of a septum with a double womb, suggested itself to my mind, and further examination revealed the correctness of this opinion. Looking upward and forward, near the edge of the symphysis pubis, I found the os uteri of another womb, with the head of the fœtus resting directly on the pubis. There was no effort making on the part of the womb to expel the fœtus, and the usual remedies failing to bring on the pains, an attempt to turn and deliver was tried; but the peculiar position occupied by this second womb, rendered it very difficult. As by this effort it was discovered that the fœtus was dead, we resorted to the crotchet, aud brought away a child weighing six or seven pounds.

The lady was the mother of five children, but never previously had both wombs been impregnated at the same time. The septum was horizontal, with the os tincæ of the lower and posterior womb in the natural position, the anterior considerably elevated.—*N. O. Med. and Surg. Journal.—Charleston Med. Journal.*

MISCELLANEOUS.

1. SOFT FOOD. We believe that one of the great causes of deterioration of the teeth of the present age is the use of soft food. Every article of diet is reduced by cooking to a pulp, and is merely mumbled in the mouth to form it into a proper bolus for deglution, or is actually swallowed as a liquid. The mastication of solid food is essential to the preservation of the teeth. We frequently see the teeth of children coated over with a kind of white paste, and the enamel softening as if they were being macerated in a dilute acid, and in a short time fall a prey to decay and are prematurely lost. From the appearance of the teeth they had bolted their food and not masticated it. The dairymen know that if milch cows are fed upon slop, their teeth will blacken, loosen, and finally fall out, or will be disabled of feeding on hay or grass, and consequently they will not purchase them with a view to keeping them in that way. We frequently see all the teeth in this condition, but two or three, which have done the chewing, and these present a polished and healthful appearance, while all the rest are going to destruction.

Several years ago a gentleman called upon us to have some operations done on his teeth, who had naturally a good set. We told him that if he did not endeavor to use both sides of the mouth in chewing he would lose half his teeth. He was startled to learn that we could tell which side of his mouth was most used. One side was clean and healthy, while the other was coated with tartar, gums spongy, and the teeth decaying. He said that this reminded him, and explained a remark which he heard the late Stephen Girard, of our city, make. Girard said "that his teeth were like some persons, if he gave them nothing to do they got into *loose ways*, but if he gave them plenty to do they got tight again." While at home, his teeth became injured by eating soft food, but when he went to sea and used harder food, they became healthy. Is there not a volume of truth lying here?—*Dental News Letter*.

2. CASE OF POISONING BY STRYCHNIA SUCCESSFULLY TREATED BY THE INTERNAL USE OF CHLOROFORM;—by *O. B. Knode*, M. D., of St. Joseph, Missouri. On the night of the 22d December last, I was requested to see, in great haste, a man who had taken six grains of this deadly poison. The individual who summoned me was an apothecary, who informed me that he had purchased from him six grains, for the purpose, as he said, of killing rats. After procuring it, he went into a drinking saloon next door, and asked for a tumbler and some water, saying, that he wanted to take a little medicine; he was observed by the barkeeper to empty the powder into the glass and swallow it down. After remaining a few moments, he remarked, that it was poison he had taken, and as it did not seem to have the desired effect, he would go into the drug store and get some more. This declaration alarmed the bar-tender, and caused him to examine the glass in which he had mixed the dose, where he found some particles of the powder adhering to it. When he entered the drug store the second time, he said he felt badly—that he had swallowed the strychnine and wanted something to make him throw it up. The apothecary advised him to see a physician immediately, and directed him to my office; he started, and had walked but a short distance before he fell convulsed upon the pavement, where I found him about twenty minutes after he had swallowed it. He was perfectly unconscious; his whole muscular system convulsed; pulse small; breathing hard and agitated. I had him removed to the City Hotel, just across the street, and placed on a pallet. There being no stomach pump at hand, I gave him 15 grs. sulph. zinc. with 20 grs. ipecac., followed by warm water, which he swallowed with great difficulty; vomiting not coming on, I procured a large feather, with which, by tickling the throat, free vomiting was induced, and the stomach seemed to be entirely emptied. He, in the meantime, remained utterly unconscious, with violent contractions of the whole muscular system occurring at short intervals. He continued in this condition for half an hour or more without much apparent change, except that the spasms seemed to increase in violence. I then concluded to give him chloroform, with the hope that it might overcome the spasms; I gave him at once a small teaspoonful mixed with a little water, which he swallowed with great difficulty; he had one slight convulsive movement a short

time after he took it, when I repeated the dose, after which they entirely ceased; and in ten minutes after, consciousness returned, and he asked that he might sit up in a chair by the fire, which he was permitted to do, when he conversed sensibly and intelligibly with me and the bystanders, and confirmed the statement I had heard from the apothecary and the bar-tender, and declared that he had taken all of the six grains, with the intention of putting an end to his life.

This is certainly a most astonishing and rapid recovery, and I can but attribute it to the prompt and energetic action of the chloroform. The emesis produced could not have done much good, as the poison had already and for a considerable length of time produced its characteristic effects upon the nervous and muscular systems; and to exhibit more fully the completeness of the recovery, I will state that he was found, four hours after, by the city marshal (who had a warrant for his arrest), snugly stowed away in bed with a prostitute.—*St. Louis Med. and Surg. Journal.*

3. SOME OF THE LOCAL AND REMOTE EFFECTS OF CHLOROFORM NOT HITHERTO NOTICED; by *C. Happoldt*, M. D., Editor of Charleston Med. Journal. The dose of Chloroform for inhalation has usually been from one to three fluid drachms, but occasionally several ounces have been administered without any injurious consequence ensuing. In Dunglison's "New Remedies," p. 295, it is stated that Dr. Simpson has used eight fluid ounces in thirteen hours in a case of labor. Dr. S. Jackson relates the case of a lady suffering under stricture of the rectum, who took five ounces in fifteen hours. Her pulse became very much enfeebled, the temperature of the body was diminished, and there was considerable mental excitement. She remained cold and nearly pulseless for forty-eight hours, when the effects disappeared.

Besides showing the large quantity of Chloroform which may be introduced into the system without producing death, I am desirous of calling attention, in the following remarks, to some of its local effects on the nerves of special sense—whose seat of function is located in the passages through which the vapor passes on its way to the lungs —and to its remote effects produced on the organs supplied by the nerves which proceed from the lower segment of the spinal column.

Two cases recently came under my observation, which are interesting for the exhibition of these phenomena. The subjects of both were of the nervo-lymphatic temperament, and of sedentary habits. They had, during several months, resorted to the inhalation of Chloroform for the purpose of procuring sleep, when this desired condition did not naturally occur at a seasonable hour. One or two ounces generally induced tranquil slumber, without being followed by any unpleasant consequence, except slight nausea, which usually disappeared after the morning meal.

One of these patients had an attack of asthma, to which he had been previously subject; and being aware of the anti-spasmodic and anæsthetic properties of chloroform, he unadvisedly put himself under its influence, and continued the inhalations for forty hours; during which time he inhaled *twenty ounces of the fluid.* The asthma was relieved, and has not since returned—nine months having now elapsed—but he was left in an uncomfortable condition: the sense of smell was abolished, and that of taste perverted. The bladder and rectum lost their tonicity and excitability. When the former became distended, a concentrated effort of the will was necessary to effect urination. The latter remained for several months in a torpid condition, requiring the constant use of cathartics to effect the evacuation of its contents. The sexual appetite was for many weeks abolished, and the restoration of the functions of these organs was slowly accomplished. Saline substances were urgently craved, and freely taken. Brandy was not disagreeable, and appeared to be of use in restoring the healthy conditions of the organs involved.

The other patient supposes that he inhaled four fluid ounces without interruption, from the fact that the vial which had contained the quantity was empty on the following morning. He remained unconscious ten hours, and on awakening experienced no unpleasant symptoms. While breakfasting he noticed the strange taste of the various dishes of which he partook; but the taste of coffee was peculiarly unpleasant; and it was with difficulty that he could be persuaded that it was not the substances which he ate, but his sense of taste, which was at fault. During the day, whatever he ate appearing perverted in flavor, he became convinced that the cause of his altered sensations lay in his organ of taste. For more than a month neither fruits, wines, tea, nor coffee could be taken with relish, and it was not until the expiration of two months that the sense of taste was restored.

The sense of smell was, for nearly the same length of time, almost abolished. The nostrils were nearly closed by the swelling of the mucous membrane. The tongue became pale in color; and the mucous membrane of the mouth and throat was flaccid and swollen, as was that of the nares.

Coincident with these phenomena, the penis was felt to be unusually flaccid; and there was no inclination to urinate. It was only after the bladder became considerably distended that urination was possible. There was no pain, but a strange sensation along the urethra while the urine was passing out. The specific gravity of this excretion was somewhat below the normal standard, and it contained a large proportion of the triple phosphates, and a trace of the crystals of uric acid. During two months there was no erection of the penis. The patient believed that the secretion of semen was not interfered with, from the sensation referred to the testes, and the desire which existed for sexual indulgence. The inability to perform the act he attributed solely to the paralysis of the perineal muscles.

The rectum and intestines partook of a similar torpidity with the urinary organs; but the sphincter ani retained its contractile power. For a week there was no evacuation from the bowels, and no uneasiness was felt therefrom. The saline cathartics had very little effect. Calomel, rhubarb, aloes, and other more drastic substances, were found most efficacious. Nux vomica and strychnine, arnica and iron, were resorted to with no perceptible effect over the paralyzed organs. Brandy, which was most agreeable to the taste as a beverage, appeared to mitigate the symptoms, and was freely taken during their continuance.

After the expiration of two months, the only remaining effect of the chloroform was constipation, which remains until this time, (December 20th,) five months since the last inhalation. This patient had never before suffered from constipation: now defecation seldom occurs without the aid of a cathartic.

Opium and its preparations have been known to produce impairment of the functions of the genital organs and bladder, as well as of the rectum and bowels; but its effects have not been so marked, or of so long duration after the discontinuance of its exhibition, as the effects which resulted from chloroform in these two cases. As some idiosyncrasies are more easily and differently impressed by this and other medical agents, chloroform may not produce the effects I have recorded, on all persons who may habitually use it in such large quantities.

The statement of the facts observed in these two cases are submitted for perusal, in order that other observers, who may not have noticed similar effects, may be prepared to counteract them should they occur; and also to warn those who may resort to this agent for the purpose of allaying irritative pain, or for producing sleep, of the dangerous consequences which may ensue from its use.—*Charleston Medical Journal and Review.*

PART FOURTH.

Medical Intelligence.

Abstract of the Proceedings of the Kentucky State Medical Society.

The fifth annual meeting of this society was held in Frankfort on the sixth and seventh days of February. The attendance was not large, being made up mostly of those who have labored with and for the Society ever since its first organization; but we were glad to see that the few present were as determined to continue their efforts in promoting the success of the enterprise as they were when they met for the first time in the same place six years before. We have room for only a brief synopsis of the proceedings as we find them published in the Frankfort and Louisville newspapers.

The meeting was called to order by the President, Dr. Spilman, of Harrodsburg, and after an opening prayer by the Rev. Mr. Safford, the reading of the proceedings of the last meeting by the Secretary, and a few resolutions concerning the arrangements for the address of the president, the future meeting of the society, and the amendment of the constitution, the reports from special committees were called for.

Drs. Gross, Bradford, Peter, and Wible asked to be continued as chairmen of their respective committees, promising to report at the next meeting.

Dr. Hughes, chairman of a committee 'On a Plan better to enable Physicians to collect their Fees,' made a report which was subsequently read and referred to the committee on publication.

Dr. E. L. Dudley, chairman of a committee 'On Improvements in Surgery,' read an interesting detail of the medical testimony rendered in a well known trial at Lexington, of two individuals charged with the murder of a gentleman in Fayette Co., Kentucky, in 1854. Referred to the publication committee.

On motion of Dr. Gross, Dr. Austin Flint, of Buffalo, and Dr. Chas. D. Pope, of St. Louis, were elected honorary members of the society.

The annual address by the president, delivered on the evening of the the first day, was listened to with great interest by the society and an invited audience, and referred to the committee on publication.

Dr. Spoor, of New York, being introduced by one of the members, presented a circular issued by the committee of the American Medical Association, calling upon the profession in all parts of the country, to furnish the chairman of the committee, Dr. Blatchford, of Troy, N. Y., with reports of all the cases of hydrophobia that have occurred under their observation, &c.

The committee on nominations reported the following names as candidates to fill the various offices of the Society for the ensuing year:

For President, W. C. Sneed, of Frankfort.

For Senior Vice-President, L. F. Owens, of New Castle.

For Junior Vice-President, J. H. Letcher, of Nicholasville.

For Recording Secretary, T. G. Richardson, of Louisville.

For Corresponding Secretary, J. C. Darby, of Lexington.

For Treasurer, W. L. Sutton, of Georgetown.

For Librarian, T. S. Bell, of Louisville.

For Committee of Publication, T. S. Bell, Lewis Rogers, and Jno. Bartlett, of Louisville.

For Committee of Arrangements, B. M. Wible, and D. D. Thomson.

After the election of the above-named officers, on motion of Dr. Sutton, Dr. Owen, State Geologist, was invited to read an essay, embodied in his report, on the subject of the 'Causes of Milk-sickness.' Dr. Owen kindly consented, and after receiving the thanks of the society, invited the members to examine the collection of coal and other specimens arranged by him in the capitol building for the inspection of the members of the legislature.

On motion of Dr. Evans, a committee was appointed to memorialize the legislature for a sum of money sufficient to publish the transactions of the society.*

Dr. Gross' resolution in relation to changing the time and place of holding the next annual meeting, was called up and so amended as to make the third Wednesday in April, 1857, the day, and Louisville the place for holding the next meeting of the society.

The President appointed the following committees to report at the next meeting:

On Public Hygiene, Dr. T. S. Bell, of Louisville.

On Vital Statistics, Dr. W. S. Chipley, of Lexington.

On Epidemics, Dr. W. L. Sutton, of Georgetown.

On Obstetrics, Dr. S. M. Letcher, of Lexington.

On Practical Medicine, Dr. L. P. Yandell, of Louisville.

On Improvements in Surgery, Dr. A. Evans, of Covington.

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* The result of this memorial was a failure.

Select Committees.

On Medical Biography, Dr. C. H. Spilman, of Harrodsburg.

On The Relation of Disease and Geological Formation, Dr. R. Peter, of Lexington.

On Statistics of Lithotomy, &c., Dr. S. D. Gross, of Louisville.

On Ovariotomy, Dr. J. T. Bradford, of Augusta.

On The use of Chloroform, Dr. D. D. Thomson, of Louisville.

On Nervous Diseases, Dr. B. M. Wible, of Louisville.

On Puerperal Diseases, Dr. N. B. Anderson, of Louisville.

On Syphilitic Diseases, Dr. D. W. Yandell, of Louisville.

Dr. Sutton offered a resolution, which was adopted, urging the members of the society to comply with the requirements of the state law in regard to the registration of births and deaths. Dr. S. also presented a new form of blanks, which he recommended in place of those now in use, being the same used in Rhode Island.

Dr. N. B. Anderson offered a preamble and resolution bearing upon the interference of the clergy in the sick room, which were adopted, and ordered to be published in the proceedings.

Dr. Chipley offered the following resolution, which was unanimously adopted:

Resolved, That we highly approve the action of the Legislature in providing for a geological survey of the State, and, viewing it as a measure calculated to develop the health and resources of the State, we trust that the present General Assembly will make a liberal appropriation for its vigorous and speedy completion.

By previous invitation, Dr. Singleton read an address, after which, and the usual thanks to the officers of the Baptist Church in which the meeting was held, and to the profession and citizens of Frankfort for their kindness and courtesy, the society adjourned to meet in Louisville on the 3d, Wednesday in April, 1857.

Correction of an Error, Proved to be no Error at all. By S. D. GROSS, M. D.

IN the *Northern Lancet* for September, 1855, the editor, Dr. Horace Nelson, in a brief notice of the second edition of my work on the Urinary Organs, has deemed it necessary to call in question the truth of certain statements in the appendix to that treatise respecting the prevalence of calculous diseases in the district of Montreal. The statements were based upon a communication kindly sent me by Professor

Hall, of McGill College, by whom their correctness has been fully and triumphantly established in the February number of the *Montreal Medical Chronicle.* The paper of Dr. Hall is accompanied by the certificates of eight physicians and surgeons, residents of the district referred to, all testifying to the infrequency of calculous disorders within its limits. A brief analysis of these documents is all that will be necessary for my present purpose.

Dr. Campbell, Professor of Surgery in McGill College, asserts that, in a practice of twenty years, during nineteen of which he has been connected with the medical staff of the Montreal General Hospital, he has not seen more than a dozen cases of renal calculi, and only eight of vesical calculi; that he has performed the operation of lithotomy three times, and has witnessed it four times in the hands of professional brethren; and finally, that, during the twenty-two years, there have been only three persons cut for stone in the bladder in the Montreal General Hospital, with an annual average, during that period, of about eighty patients, and an extensive daily attendance of out-door cases at the dispensary.

The testimony of Dr. Holmes, Professor of Medicine in McGill College, perfectly coincides with that of Dr. Campbell. He avers that calculous complaints in the district of Montreal are "far from frequent," and that Dr. Hall's statements, referred to in my treatise, are "generally correct." Dr. William Belin, of L'Assomption, in a practice of nearly thirty years, has met with only three cases of urinary calculi, none of which required operation. Dr. J. B. Johnston, of Sherbrooke, has been in active practice, at that town, for fifteen years, has never seen an instance of the disease, either in his own district or in that of his professional acquaintance, extending over a circuit of thirty miles. Dr. Robert H. Wright, of St. Johns, testifies that he has practised at St. Johns and La Prairie twenty-one years, and that during all that time he has treated only two cases of vesical calculi. Dr. Francis N. Sherriff, of Huntington, and Dr. Charles Smallwood, of St. Martin, during a similar period, have each observed four cases of the disease.

In addition to these certificates, Professor Hall has appealed to the statistics of the Montreal General Hospital and the Hôtel-Dieu. From this it appears that, during a period of twenty-years, from 1825 to 1846, not a single case of calculous disease was admitted into the former of these institutions, and only two since that period. At the Hôtel-Dieu, in a similar period, only five or six cases have presented themselves.

From all these facts it is evident that calculous diseases *are* very infrequent in the district of Montreal, and that the statements in my work on the Urinary Organs, in reference to this subject, *are* true.

The attack of the editor of the *Northern Lancet* upon Professor Hall appears to have been provoked by the fact that this gentleman, in his communication to me on the subject of calculous diseases, omitted all allusion to Dr. Robert Nelson, "who," the editor asserts, "has operated close on to, if not more, than one hundred times in less than twenty years." This seems to have been Dr. Hall's great sin, the head and front of his offending: but here, again, the learned and ingenuous Professor is triumphant; for in the certificate of Dr. J. S. Brigham, of Philipsburg, appended to the article in the *Montreal Monthly Chronicle*, that gentleman positively affirms that he had heard Dr. Robert Nelson declare, in 1839, that he had, up to that period, performed the operation of lithotomy only thirty-nine times.

I have thus given a succint but faithful analysis of the facts adduced by my friend, Professor Hall, in vindication of the correctness of his statements to me in regard to the subject under consideration. The reader will not fail to draw his own conclusions.

Finally, I may be permitted to state, that the facts, of which the appendix in my work on the urinary organs consists, were furnished me, in every instance, by physicians of the most reliable character for truthfulness and power of observation.—*Buffalo Med. Journal.*

It will be seen, by an extract taken from the American Journal of Pharmacy, that the sophistication of drugs is as well understood in this country as on the other side of the Atlantic. Indeed, we need not go to Philadelphia or New York to find this out, although doubtless the inhuman traffic is more largely carried on in these cities than in other parts of the country. It is but a day or two since a gentleman of this city obtained from two apothecaries two specimens of chloroform, which upon examination were found to be largely adulterated, mostly with alcohol and the pyrogenous oils. One of the specimens contained only about twenty-five, and the other less than fifty per cent. of chloroform. We think, therefore, that we are conferring a favor upon the physicians of this vicinity, by informing them that a manufactory of pure medical chemicals has lately been commenced in this city under the auspices of men who are above suspicion, and we take pleasure in calling attention to their advertisement on the cover of this journal.

EDITOR'S TABLE.

IN offering to the medical public a new professional periodical, the editors have no lengthy apology to make, and the studied graces of the usual salutatory are neither to our taste nor talent. In looking at the huge pile of American and republished foreign medical journals that have accumulated upon our table during the past month, we cannot conscientiously say that there is a call for another, notwithstanding the hiatus that has been produced by the suspension of the Western Journal of Medicine and Surgery, the oldest and the ablest publication of the kind that the valley of the Mississippi has ever produced. But, as stated in a circular, issued some weeks since, we have undertaken the enterprise "as a labor of love,—love for the labor and for the glorious profession in which we are actively engaged;" and this is our only apology to that class of professional pre-Adamites who are startled from their ancient propriety, and consider themsélves personally affronted by every new thing, and this our only introductory to the liberal-minded progressive few, who heartily welcome every honest endeavor, which has for its object the diffusion of knowledge and the progress and improvement of our noble science.

It may be observed here, however, that, although the end we have in view, is common to every medical journal in the land, the means by which we hope to attain it, differs somewhat from that universally adopted in this country. To the readers of medical periodical literature, it is well known that a strictly review journal has never been attempted in the United States, and it is doubtful whether the time has yet come when such a publication is absolutely needed; but, at the same time, it cannot be denied, that with the increasing multiplicity of medical books, both American and foreign, there is a growing want of faithful analytical and critical reviews. It is to this branch of editorial labor that we intend to devote our best energies, and we hope, by the assistance of a large and powerful corps of collaborators, to succeed in establishing a medium through which our readers may learn something concerning the host of medical books that are 'shouldering each other' into the notice of the profession. But let us not be misunderstood. We do not aspire to the censorship of the medical literature of this country, or even the directorship of the reading of those who kindly place themselves within the range of our journal, but we are determined that so long as we live, and with whatever strength we possess, we shall cry out against the servile bending of the knee to the English Baal of medical criticism so common in some sections of this country, and, we regret to say, more especially in that part which was the first boldly to throw off the political yoke that England had placed upon our necks. We congratulate our Southern and Western brethren in their comparative freedom from this shameful idolatry, and we hope we have good reason to believe that they will never submit to its degrading influence.

In thus giving prominence, however, to the review department of the journal, we shall not in any manner slight, and much less omit the sections usually devoted to original communications and selections. Indeed, we need only refer to the articles contained in this No. under those respective heads to prevent any misapprehension upon this point.

The question concerning the mutual relations of journalists and book-publishers, the general discussion of which has been recently excited by a well known occurrence in Boston, is one of peculiar and delicate interest to the conductors of medical periodicals, and more especially of those in which the review department forms a prominent feature. Delicate, however, as it is, it should be met, and as it concerns ourselves, a more favorable opportunity than the present will probably never occur, when our 'Review' is yet in its swaddling clothes, and acknowledges no obligations for food or raiment to either author or publisher. Of the merits of the individual case referred to, we know nothing, and do not therefore pretend to have an opinion. The plain statement of the occurrence, as well we can learn, is, that in consequence of a severely critical notice of Mr. Longfellow's Hiawatha, that appeared in the columns of a newspaper, called the Boston Traveller, the publishers of the poem immediately withdrew their patronage from the paper, and demanded a settlement of their mutual accounts. An issue of such vital importance, between parties so well known, has naturally brought into opposition corresponding elements in all quarters of the country, and the two factions may now be found to exist in every city and village from Maine to Texas, fighting on their own account with just as much animosity as though each laid claim as well to a Longfellow as to a newspaper. When and how the contest is to end, we will not pretend to predict; indeed, we doubt whether it will ever absolutely cease, but becoming supplanted by other excitements, its fires will gradually go down, and remain in a smouldering state until some future *traveller* wishing to light his pipe, shall again blow it into life. In view of this state of things, which it will be observed admits of no middle course, we naturally fall into the ranks of the editorial party, not for the sake of opposition, but simply because we believe them to be the conservators of a right, the possession of which is essential to independence of thought and an honest expression of sentiment. Such being our position, we can assure the readers of the Review, that whatever passes through our hands for the purpose of analysis, shall receive a careful examination, and, human weakness permitting, an unbiased judgement.

The ignorance of Europeans generally, in regard to the political and social institutions of this country, has long been proverbial; but considering that true science, like true religion, is a unit the world over, whether its cultivators live upon whale oil and seal meat, or plantains and pine apples, whether they breathe the impure atmosphere of London or Paris, or snuff the invigorating breezes of the table lands of Mexico, we confess that it is a matter of great astonishment to us, that in these days of steamships and steam-presses, the medical profession of Great Britain, men who speak our own language, and with whom we have a near blood relationship, should continue in such total obliviousness of what has been done and is now doing in the United States to advance the science and art of medicine and surgery. It is true, that they do acknowledge that the discovery of anæsthesia was made by an American, but to the admission of this, they generally add some expression of contempt for our pretensions, and re-echo the sentiment "that because the Americans have discovered anæsthesia, they have become so puffed up as not to be able longer to realize their true position in the world of surgery," of which a French surgeon,* as notorious for his recklessness of morals as of the lives of his patients, relieved himself not long ago. But we are more especially surprised to find such opinions expressed, and the foregoing assertion of the slashing Frenchman revamped and copied into so respectable a journal as Ranking's Half-yearly Abstract. The editors of that deservedly popular periodical in beginning a notice of Dr. Bedford's late work on diseases of women and children, go not a little out of their way to give a fling at what they in their wisdom are compelled to consider the degraded state of our professional standing and morals. Ye shades of Rush, Physick, Dewees, Drake, Caldwell, and Beck, hear what the renowned gentlemen say of us, your hard-working but buccaneering children!

"Although we are indebted to America for the application of anæsthesia to therapeutics, and for exhibiting to us the almost inexhaustible powers by which nature sometimes recovers patients from operations to us appalling by their boldness and magnitude, still we may safely say there is no American school of medicine; whereas, there is a French, a German, an *Italian** and an English. Our transatlantic offspring reprint, translate, and pirate the medical works of other nations, but they produce little of their own. Their pathology is chiefly French; their therapeutics English. * * * The working men in America are always on the look-out for the new lights rising over the old world; and they often too hastily adopt, as the pure gold of science, the crude lucubrations which must find place with more valuable matter in the weekly medical press."

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* Maissonneuve.

As for ourselves, we have no idea that the *abstracted* editors knew what they were writing when they penned the foregoing paragraph. They evidently wished to say something very severe, but have only succeeded in making themselves ridiculous. If we had the patience, and believed that we should be listened to with a desire to learn, we could teach these gentlemen not a little concerning the state of medicine and surgery in this benighted country, that would make them open their eyes, and cause them to extend their knowledge a little farther westward than Halifax or Boston. But, despairing of such a favorable result, we shall confine ourselves to a bare mention, so far as our present memory serves, of some of the more marked improvements in surgery that the profession of this country has effected within the last half a century; and which, if we mistake not, will compare most favorably with what has been done in England—to say nothing of poor Italy—in the same period. Witness, for instance, the great success of our surgeons in the operation of lithotomy; their enviable reputation in connection with the radical cure of hernia, the ligation of arteries, and the treatment of fractures; their great skill and dexterity in the excision of the lower and upper jaws, clavicle, and other entire bones; the first introduction of and the favorable results attending the removal of ovarian and uterine tumors by the abdominal section; the substitution of incision of the serous accumulations for tracheotomy in œdematous laryngitis—an improvement which, we have reason to believe, is not yet generally known to European surgeons, especially those of London, notwithstanding its obvious propriety and great simplicity; the recent introduction of simple manipulation for the replacement of dislocated bones; the still more brilliant success of the two American operations for vesico-vaginal fistule, one of which is for the first time presented to the profession in this journal; the first use of the seton in the treatment of ununited fractures, &c. We might still farther multiply facts, equally striking and not less convincing, that it is not the custom of the members of the profession in this country to be looking everlastingly in their neighbors' back-yards, ready to pick up their refuse "crudities," and pass them off on their unsuspecting countrymen as "the pure gold of science." But we fear to drum too much on the incredulous ears of our British brethren, lest they become deaf to everything we may tell them in future.

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* The italicism is our own.—ED.

There is one fact, however, that may be stated for their edification in regard to the medical literature of this country; which is, that, although we do not spend much time in making text books for medical students, we possess a periodical literature that is unsurpassed in extent by any country of Europe, Germany not excepted. Over thirty medical journals, varying in size from the modest weekly to the ponderous quarterly, all containing more or less original material, pour their contents into the common retort from which is condensed a stream of pure science more than amply sufficient for the wants of those who crowd its shores, to say nothing of what is bottled up and taken across the Atlantic; where, be it stated, the bottles no sooner arrive than their labels are torn off, and their contents carefully transferred to other vessels.

In conclusion, we would seriously ask our own people, if, after all, this ignorance of our European brethren is entirely their own fault? Or are we not somewhat to blame, especially in the matter of neglect, arising from envy, jealousy, or ignorance, with which we treat our native men of merit, men upon whom the highest professional honor and respect would be conferred, did they but live in England or France. For instance, the Boston Medical and Surgical Journal, for February, 1856, heralds the recent researches of M. Brown-Séquard thus: "Seldom has the scientific world been taken more by surprise than when M. Brown-Séquard announced his recent discoveries relative to the functions of the spinal marrow." Then follows an abstract of the brilliant and astonishing results, the reader of which, if he is a believer in the new doctrines, naturally assents to the high eulogies passed upon the illustrious Frenchman, not knowing that precisely the same results were obtained from innumerable experiments upon human beings immediately after death, and from hundreds of vivisections by Dr. Bennet Dowler, of New Orleans, more than a dozen years ago, which deductions were published in pamphlet form, and sent to all the large cities of Christendom,* not excepting the renowned capital of Massachusetts. And yet the Frenchman receives the honors of the Imperial Academy, while Dr. Dowler is ignored, not only by the said Academy, but by his own countrymen of the Boston Medical and Surgical Journal. We commend Dr. Dowler's statement of the case, contained in the March number of the New Orleans Medical and Surgical Journal, to those who "are always on the look-out for the new lights rising over the old world."

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* New Orleans Journal.

It is our intention to furnish the subscribers of the Review, at the beginning of each new volume, with a biographical sketch and steel engraving of some one of the honored dead of the profession of the South-West. For the first of this series we have selected Dr. Drake, partly because he was the founder of medical journalism in this country, but more particularly because of the active and zealous part which he took in developing the professional resources of the South-West, holding the first rank in the profession, as a writer and lecturer, for nearly half a century. The engraving will be immediately recognized by all the Doctor's friends and acquaintances as being a most admirable likeness.

It gives us much pleasure to present our acknowledgements to those gentlemen who have so kindly consented to act as collaborators of the Review; and we take this opportunity of saying to them, that we shall at all times be glad to receive their contributions, and publish them as rapidly as the restricted limits of our journal will permit. We beg leave, however, to suggest to them the propriety of limiting themselves to articles of a purely *practical* character, whether such articles be reviews, essays on special diseases, or reports of cases. Our great desire is, that our periodical shall convey to practicing physicians and surgeons as much as possible of such professional information as will profit them at the bed-side of their patients. In making this request—for we prefer that the suggestion should be taken in the sense of a request—we are fully aware that we are asking information which, of all others, is the must difficult to obtain; but no one will deny that it is the most valuable. It is a kind of knowledge that is not to be obtained by merely scratching the surface of the field of science: it lies far beneath the dry leaves of surmise and speculation, that are thrown into confusion by every passing breeze, and deeper than the rich soil of theory, from which the rank and pestiferous weeds of empiricism spring up to poison the very atmosphere with their exhalations: it must be labored for with the spade and pick-axe and a sweating brow, as the Brazilian slave labors for the precious gem that is to purchase his freedom, or as the soldier labors by carefully defended approaches to reach the city he is besieging; and we hesitate not to affirm that no man has a right to a place in the ranks, much less to the honors, of the profession, who is not willing to bare his head to the meridian sun, or serve his turn in the trenches.

For men of mere talk, men who claim to be heard through the press and in the lecture room, simply because their tongues happen to be hung somewhat nearer the centre than those of their industrious but more quiet brethren, we confess to a supreme contempt. If we have a proper conception of what a science requires, and of its necessarily gradual growth, we cannot believe that the cultivators of true knowledge will ever become so overstocked with the results of their labors as to require the aid of auctioneers. It is true that such a class of men have foisted themselves upon the profession; and, ever anxious to keep their lingual powers in action, they may be seen in all public places, and their *bleating* may be heard from one end of the land to the other; and we doubt not that the God of Medicine, in his frequent stethoscopic examinations of the world's chest, is sorely puzzled to know the cause of such loud and continued egophony.

We need not call attention to the article, in this number of the Review, entitled "Vesico-Vaginal Fistule:" its importance, and the wonderful success in its treatment obtained by the author, will, we doubt not, lead to its general perusal and careful study. Dr. Bozeman now stands before the world as the most successful operator, for the disease in question, that the profession has yet produced. And we may be permitted to say here, that we take especial pleasure in congratulating him upon his high distinction, as it is but a few years since he held the relation of private pupil to the senior, and assistant demonstrator of anatomy to the junior, editor of this journal.

NECROLOGICAL NOTICES.

THE LATE DR. JOHN T. MCELVANY.—It is with feeling of deep regret that we announce the death of this gentleman, one of the most estimable and distinguished physicians of Nelson County, Kentucky. It took place at his residence at Bardstown, on the 8th of March, in consequence of severe injuries received only a few hours previously. The circumstances, attending the accident, were of a peculiarly melancholy nature. Late in the afternoon, on the day here mentioned, as he was returning from a visit to a patient in the country, he was thrown out of his buggy, which, together with his horse, was precipitated, along with Dr. McElvany, down a steep embankment, on the road-side, upwards of thirty feet in height. In the fall the cartilages of the third, fourth, fifth, and sixth ribs were separated from the sternum, and the sixth rib was fractured near its centre. He soon recovered his consciousness, and, after lingering in great agony, expired the same night at 11 o'clock. No examination of the body was made, and the immediate cause of his death is therefore unknown.

Dr. McElvany was a native of Abbeville, South Carolina, where he was born in July, 1804. Emigrating early in life to Kentucky, he studied medicine with the late Dr. Burr Harrison; and, in 1832, began the practice at Boston, a little village in Nelson Co., from which he removed to Bardstown, where he resided during the last fifteen years, in the enjoyment of a large, respectable, and lucrative business. He took his medical degree at the University of Louisville in 1848.

Dr. McElvany was twice married; first to Miss May, and afterwards to Miss Hayden, an accomplished and excellent lady, who, with a son, nine years old, survives to lament his loss. It is gratifying to know that, by his industry and economy, he has left his family in easy circumstances.

In person, Dr. McElvany was tall and well proportioned, with a remarkably handsome, frank, and manly countenance. His features, when lighted up by the excitement of conversation, exhibited a peculiarly radiant and benignant expression. In his manners, he was cordial, polished, and fascinating, reminding one forcibly of the ease and grace of a gentleman of the "old school," a class of men now rapidly passing away, but of whom there were many, in former times, in Virginia, as well as in South Carolina, Dr. McElvany's native State. He was a high-toned, whole-souled, chivalrous man, gentle as a child, and generous almost to a fault; a man who always carried his heart in his hand, and whose conduct was always influenced and governed by the nicest sense of honor. Endowed with a keen sensibility, he was ever alive to the claims of his fellow-citizens; and the poor of

Bardstown and Nelson County will long remember, with gratitude, his many acts of kindness and benevolence. In his death they have lost a generous and devoted friend, whose presence so often cheered them in sickness and distress. No weather was too inclement, no cold too severe, no heat too intense, no tempest too fierce, to restrain him from the discharge of his professional duties. *Nunquam non paratus* was his motto, and most nobly did he carry out its behests.

In his intercourse with his professional brethren, Dr. McElvany was governed by the purest principles of ethics, by the highest code of honor. His popularity with them and with the people among whom he lived was universal. No jealousy, no spirit of rivalry, ever disturbed his equanimity. He was entirely free from every feeling of the sort. The attention which the medical faculty of Bardstown showered upon him during his last illness, the grief which they exhibited at his funeral, and the resolutions which they passed after his death, all attest the sincerity of their regard for their late associate, and their profound regret at his unexpected and melancholy fate. As a husband, father, and friend he was all that man could be; devoted, kind-hearted, gentle, considerate, confiding. As a physician, he possessed uncommon accomplishments. He has left no memorial of his life, save a good name, the affection of his family and friends, and the gratitude of the community in which he had so long practised his profession. Medical literature, we believe, never received any contributions from his pen.

THE LATE DR. CRAWFORD.—The medical profession of Canada have lately sustained a great loss in the death of Dr. James Crawford. In the February number of the Montreal Medical Chronicle, is an elaborate obituary notice from the pen of one of his friends, who pays a just tribute to his many virtues.

Dr. Crawford was born, in 1796, in Donegal, in the North of Ireland. He commenced his medical studies in Dublin, entered the army, as Hospital Assistant, in 1814, and graduated in 1821 at the University of Edinburgh. He wrote his inaugural dissertation on stricture of the urethra.

Dr. Crawford was for many years a collaborator of the Montreal Medical Chronicle, to which he contributed many valuable papers, mostly on clinical medicine and surgery; he communicated two articles, descriptive of instruments which he had invented for the compression of arteries and the treatment of fractured clavicle. These instruments subserved an excellent purpose, and displayed great ingenuity and mechanical skill. It was in the pages of this periodical that he had the merit of first recommending the use of iodine as a local ectrotic in variola. His article on this subject was extensively copied abroad, and attracted much attention at the time. He was also a contributor to the Montreal Medical Gazette and the British American Journal of Medical and Physical Sciences.

For ten years, Dr. Crawford occupied the chair of Clinical Medicine and Surgery in the McGill College, Montreal. Clinical medicine may be said to have been first taught by him, as a special branch, in Lower Canada. He was a ripe scholar, and always evinced the greatest zeal in the advancement of medical literature; an able and perspicuous writer, an earnest lecturer and an excellent teacher, drawing largely upon the rich stores of his own mind. Dr. Crawford died on the 28th of December, 1855, after an illness of twenty-six days, occasioned by a fall from his carriage.

DIED, at Albany, N. Y., Nov. 19, 1855, T. ROMEYN BECK, M. D., LL. D., in the sixty-fifth year of his age. Dr. Beck was born in Schenectady, N. Y., Aug. 11, 1791; was appointed Professor of the Institute of Medicine in the College of Physicians and Surgeons of Western New York, in 1815, and made Principal of the Albany Academy in 1817, which last mentioned office he held at the time of his death. "He was distinguished for his cultivation of the liberal sciences, but is most widely known by his valuable treatise on *Medical Jurisprudence*, a work which has passed through four editions in America, and four in England, and has been translated into the German."

At Owensboro', Kentucky, in the fifty-sixth year of his age, DR. R. W. MURRAY. "He enjoyed a deservedly high reputation as a physician, and a gentleman whose sterling sense and liberal heart commanded universal respect."

February 29th, DR. W. P. C. BARTON, of Philadelphia, late Senior Surgeon in the United States Navy.

March 18th, in the eighty-fourth year of his age, DR. THOMAS BOYD, for over sixty years a practitioner of medicine in New York city.

On the 18th of September, 1855, PROF. J. F. W. JOHNSON, the distinguished Agricultural Chemist of Durham, England.

On the 16th of July, 1855, at the age of eighty-four, ARCHIBALD ARNOTT, M. D. He was known as one of the medical attendants of the Emperor Napoleon the First.

On the 8th of October, 1855, in the seventy-third year of his age, FRANCIS MAGENDIE, the celebrated Physiologist, and author of a well known Formulary.

In London, November 17th, 1855, suddenly of hemiplegia, MR. PILCHER, a member of several benevolent societies; a Fellow of the College of Surgeons; and a Member of the Council; but probably more widely known, in this country, as the author of an excellent treatise on Aural Surgery.

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THE

LOUISVILLE REVIEW,

JULY, 1856.

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THE
LOUISVILLE REVIEW.

JULY, 1856.

PART FIRST.

Analytical and Critical Reviews.

Art. I.—*Prize Essay on Placenta Prævia. By* James D. Trask, M. D., *of White Plains, New York.—Transactions of the American Medical Association for* 1855.

In one of the Northern States, quite recently, a curious trial came off before one of the State courts. A common practice prevails in that region, of sueing medical men for mal-practice, especially in surgical cases, and many hard verdicts have been rendered against innocent practitioners of the healing art. In the case alluded to in the commencement of these remarks, a medical man turned the tables upon his supposed maligner, by prosecuting for damages on an allegation of libelous language. The defendant in the suit had charged that the death of his wife was due to the unskillful practice of the plaintiff, in a case of retained placenta. We refer to the trial, not for the purpose of criticising its general character, but on account of the remarkable diversity of opinions on the part of the medical witnesses. The wife had been delivered by a midwife; some time afterwards a physician was called in, thus implying quite strongly that *his* services were needed; but he could not well have done much less than he did on his first visit, if he had never been summoned. The woman was flooding when he was called; the placenta was retained, and was probably adherent in part to the womb. In these circumstances the persecuted physician administered some medicine *and left the case for two hours.* It is scarcely possible to imagine how there could have been the least diversity of medical opinion on such a condition of things as this. Until we saw the evidence reported in the trial, we supposed that medical practice in this state of things was a unit. The plea set up by the medical practitioner in this case, for his inertness, was one of the most curious ever pleaded for a wrong. He based his justification on the ground that the womb was inert, as if that was not the very reason for the necessity of the resources of his art! If that is the proper course in such cases, why need a medical man ever interfere in a condition of flooding? That is almost always due to inertness of the womb, and the services of the medical man are put into requisition to overcome this very inertness. It was the glory of the elder Ramsbotham, that he pointed out the ready and certain means for the accomplishment of this very object, and in that way he saved the lives of multitudes of women. And if a mother, flooding to death, does not appeal to all the sensibilities of the medical man, who for the time being holds the issues of her life or death in his hands; if such a peril cannot rouse all the resources of medical art, pray what can? In the case of the woman, whose surviving husband was prosecuted for charging her death upon the medical attendant, we should have supposed that the aorta would have been commanded, the placenta promptly removed, and the womb excited to vigorous action. Not one of these obvious measures was resorted to; the placenta was undisturbed, the flooding was permitted to go on *in unknown quantities,* and the physician strolled off from such a case for an absence of two hours! When he returned, he undertook, without any change in the inertia of the womb, to do what should have been done two hours before. He removed the placenta, and the woman stopped any further services on his part, by dying almost immediately. She had bled to death. And the jury amerced the unfortunate husband by a verdict for three hundred dollars damages, because he had found fault with the treatment his wife had received. We would not say anything that could wound the feelings of such a physician; we do not wish to convey an idea of censure of *him,* but we declare conscientiously that, had we been the physician in the case, had we managed it as this gentlemen did, and brought it to such a terminus as he did, we should have felt that we were guilty of malpractice, and that we had caused the patient's death.

We have referred to the incidents of this case in order to rouse the attention of medical men to the important principles and facts contained in the paper of Dr. Trask, on placenta prævia, which obtained the prize before the American Medical Association, at its eighth annual session. That paper does much credit to the judgment, science and industry of Dr. Trask; and the important doctrines which he teaches, should be ingrained into the minds of all medical practitioners. No one of them knows at what moment he may be involved in all the perils of placenta prævia; and the man on duty may have the whole responsibility of two lives dependent on the promptitude by which his skill, guided by thorough knowledge, may be brought to bear on the danger. All chance for consultation may be hopeless; all may be left to the judgment of the practitioner at his post of duty. It is a fearful responsibility, which should not be lightly felt.

Smellie and Levret, about the middle of the eighteenth century, first noticed the fact that the placenta was attached around the mouth of the womb, but they did not appear to see the important fact deducible from it—that in such cases *hemorrhage was unavoidable.* Dr. Rigby, of Norwich, was the first to announce this fact. He made the announcement in 1776. A variety of management for such cases has been commended, and it is of great moment to the practitioner that he shall make the proper selection for each case. The use of the tampon is warmly urged by many judicious practitioners, while its total disuse is commended by many others. Its judicious application so as to secure firm pressure at the source of the hemorrhage, should not be discouraged, but it should be carefully watched, and should not be relied upon carelessly. A spontaneous arrest of the hemorrhage occasionally occurs; and injurious deductions, made from that occasional occurrence, were sustained by authors who are well entitled to the respect of the profession. We refer to these facts in order to show the practitioner that he has ample use for a discriminating judgment in cases of placenta prævia, and that it is his duty to be armed with all the resources of his art, for all the varied complications of these hemorrhages. In the first place, the practitioner should be careful in making his decision as to whether he should interfere. When he decides that interference is necessary, it is very important to decide as to what shall be the character of the interference. Dr. Hamilton adopted the theory that, in the usual arrest of the hemorrhage, "there was not a formation of coagula within the mouths of the open vessels, but the cessation of the hemorrhage was due to the retraction of these vessels with in the tissue of the uterus by which they were constringed, and by a change which the separated portion of the placenta undergoes, analogous to adhesive inflammation." This theory would at once destroy the claims of the tampon, yet certainly all practitioners have found abundant benefit from it in some cases of placenta prævia. We have relied upon it in a number of cases, for carrying the patient to the full period, and have seen it succeed in that important result.

We may as well give the modes of procedure in cases where the hemorrhage assumes a perilous character. We quote from Dr. Tucker:

> "1st. If the strength of the patient be not greatly exhausted, the hand, gently passed through the os uteri, should be insinuated between the placental mass and the walls of the uterus into the cavity of the organ, and when *there*, the feet should be seized, and turning effected in the manner to be described hereafter. This is the plan most usually adopted by obstetricians, in placenta prævia cases. The objection to it is, that the necessary separation of the placenta from the uterus, for the purpose of introducing the hand into the uterus, occasions an increase in the flow of blood; hence it is said that this mode is not applicable to those cases, where the strength of the patient has been much exhausted by the loss of blood.
>
> "2d. Where the patient's exhaustion is extreme, and where we have reason to fear any further loss of blood, Blundell advises that the placental mass shall be perforated by forcing the hand through it, into the uterine cavity, when the feet may be seized, turning effected, and the child extracted through the opening made in the placenta.
>
> "3d. But another mode of treatment in these cases, has been lately proposed by Drs. Simpson and Radford, and before entering into the detail of the facts upon which this new plan is based, it is necessary to premise that Dr. Simpson does not advise its adoption in every

case, but only under the following circumstances: 'In severe cases of unavoidable hemorrhage, complicated with a rigid and undilated os uteri, in which turning would be either impossible or hazardous; in most primiparæ; in unavoidable hemorrhage, with premature labor, and an undeveloped condition of the os and cervix; in placenta presentations with distorted pelvis; in cases where the extreme exhaustion of the patient forbids turning, and when the fœtus is ascertained to be dead, or is premature and not viable.'"

To this third form of treatment we shall now direct our attention. Dr. Simpson offers the following deductions from his researches:

"1. The complete separation and expulsion of the placenta before the child, in cases of unavoidable hemorrhage, is not so rare an occurrence as accoucheurs appear generally to believe.

"2. It is not by any means so serious and dangerous a complication as might *a priori* be supposed.

"3. In nineteen out of twenty cases in which it has happened, the attendant hemorrhage has either been at once altogether arrested, or it has become so much diminished as not to be afterwards alarming.

"4. The presence or absence of flooding after the complete separation of the placenta, does not seem in any degree to be regulated by the duration of time intervening between the detachment of the placenta and the birth of the child,

"5. In ten out of one hundred and forty-one cases, or in one out of fourteen, the mother died after the complete expulsion or extraction of the placenta before the child.

"6. In seven or eight out of these ten casualties, the death of the mother seemed to have no connection with the complete detachment of the placenta, or with results arising directly from it; and if we do admit the three remaining cases, (which are doubtful,) as leading by this occurrence to a fatal termination, they would still only constitute a mortality from this complication, of three in one hundred and forty-one, or of about one in forty-seven cases.

"7. On the other hand, under the present established rules of practice, one hundred and thirty-three mothers died in three hundred and ninety-nine placental presentations, or about one in three."

On the cause of the arrest of hemorrhage in these cases, Dr. Ramsbotham says:

"I think it may be satisfactorily explained how the woman's life is preserved. The head of the child is pushed down upon the os uteri, which suddenly gives way. Under its relaxation the placenta is loosed from its previous attachment and falls down before the head, which now comes into immediate contact with the bleeding vessels, and by mechanical compression closes their mouths; from this moment, therefore, the loss of blood is suspended, and the head is afterwards expelled by uterine action." "Campbell says that 'it may be presumed that in these cases the fatal event must have been prevented by the quick descent and consequent pressure of the body of the child upon the point whence the placenta had been detached.' But Dr. Simpson very forcibly remarks that this explanation is erroneous, 1st, because in some of those rare instances, in which the bleeding continued, notwithstanding the total separation of the placenta, the child's head did present, but did not by its compression arrest the hemorrhage. 2d, Because, in many of the cases cited the hemorrhage ceased after the entire detachment of the placenta, although neither the head nor any portion of the child presented, which was capable of arresting the flooding by mechanical pressure."

In answer to the views of Ramsbotham, Campbell and others, as to the rationale of the arrest of hemorrhage by the pressure of the head of the fœtus, he says:

"In a considerable proportion of cases collated into our general table, the child presented preternaturally with the foot, feet, arm, or shoulder. These parts are all of such a form and size that they could not be applied as compresses upon the part of the uterus which was exposed by the previous detachment of the placenta, and yet the hemorrhage appears to have been as *constantly* and as *completely* arrested in those instances when once the placenta was perfectly separated, as it was in cases in which the head or breech of the child came afterwards to press upon the cervix uteri. The following tabular view will demonstrate this important point, by showing the number of instances in which a lower or upper extremity came down after the expulsion of the placenta, and the degree of hemorrhage that was observed to follow in these cases.

Degree of hemorrhage after separation of placenta in	Footling Presentations.	Arm or Shoulder presentations.	Total.
Great	—	1	1
Considerable, . . .	1	—	1
Slight,.	—	2	2
Little or none,. . .	2	8	10
Not stated,. . . .	2	7	9
	5	18	23

"These data prove that 'great' or 'considerable' hemorrhage, after the expulsion or detachment of the placenta, is not more liable to occur when the retained fœtus afterwards presents by an upper or lower extremity, than when it comes down with the head or breech upon the exposed surface of the cervix uteri. The proportion of cases in which the hemorrhage continues is not greater under the one set of presentations than it is under the others. And these observations seem to me to afford amply sufficient grounds for rejecting the idea that the prevention of the hemorrhage after the complete separation of the placenta, is to be explained by the presenting part of the infant coming down and acting as a compress upon the exposed orifices of the uterine vessels. It may be an auxiliary, but it is not a primary or essential cause of the suppression of the hemorrhage. For the mechanism of the arrestment of the flooding, in cases in which the placenta happens to be completely detached, and the child left in utero, is, I believe, of a totally different kind. But, in order to understand it, let me first premise that obstetric pathologists are in all probability incorrect in the rationale which they currently give of the immediate source of sanguineous discharge in instances of flooding—whether accidental or unavoidable—from partial separation of the placenta."

Dr. Hamilton was the first to assert that the hemorrhage is due to the vessels of the placental mass, and not to the mouths of the uterine vessels. In order that the whole subject may be before the mind of the reader, on the important mooted points before us, we shall permit Dr. Simpson to speak at large upon this branch of our inquiry. He says:

"To understand the true source of flooding, in unavoidable and accidental hemorrhage, the cause of its continuance, when the separation of the placenta is partial, and the mechanism of its arrestment, when that separation is complete, we must take into consideration the following different points: *first*, the maternal portion of the placenta is of a cavernous structure; that is to say, it consists of a series of maternal cells or dilatations, or, perhaps, more properly speaking, of one large maternal vascular bag, into which the blood of the mother is conveyed by the utero-placental arteries, and from which it is removed by the utero-placental veins; *secondly*, the vascular maternal cells, or immensely dilated capillaries, which contain the blood of the mother in the placenta, communicate so freely with each other, throughout all the different portions of the organ, that the blood which has access into one part, may in this way be rapidly diffused into the other portions of the placental mass; and, *thirdly*, the deciduous or uterine surface of the placenta has no vital, muscular, or contractile power, by which it can constrict the orifices of the vascular tubes, which pass from the uterus into it, when these tubes are ruptured, in consequence of a greater or less detachment of the organ from the interior of the uterus. From the consideration of these premises, it will readily appear that when a small portion of the placenta is detached, it occasionally occurs, as I have already shown in the early part of the present essay, that the consequent hemorrhage is sometimes so great as to be dangerous, or even fatal, in its extent. Its amount, under this and other circumstances, may also be regulated and increased by the occurrence, (in consequence of uterine contraction, or otherwise,) of any *laceration* in the detached portion of the placenta itself; for when the substance of the organ is torn, its vascular maternal cells will be more freely opened into and exposed, and a more profuse discharge be allowed to issue from them. We may further easily conceive, why the discharge should sometimes be actually more abundant when the detachment of the placenta is slight, than when it is greater in degree. For the quantity of blood passed into the maternal vascular structure of the organ, and consequently the quantity liable to escape from its unattached surface, will, in some respects, depend upon the extent of vascular placental connection which continues between it and the uterus. In other words, the intensity of the resulting hemorrhage will be regulated as much, or more, by the extent of placental surface which *still* remains in attachment to the mother, as by the extent of surface which is *already* detached; for the freedom with which the blood is supplied to the placenta will affect the violence of the flooding, equally, or more so, than the freedom with which that blood is allowed to escape from the open orifices of its ruptured vessels.

"Probably, in most cases, the hemorrhage will reach its maximum when the quantity of blood which enters the placental cells by the adherent portion, is equal to what can reach and escape from the open orifices of the separated portion. Any additional separation after this will tend rather to diminish the flooding, as less blood will be carried into the placenta, from the number of its channels of supply being diminished. Most accouchenrs seem to believe that the greater the degree of detachment, the greater will be the hemorrhage, and hence, we are earnestly cautioned, in the operation of turning in *placenta prævia*, not to separate more of the placenta from the cervix uteri, than is absolutely necessary to permit of the passage of the hand. Theory, as well as experience, would seem to throw the greatest doubts upon the soundness and propriety of this rule. If at all true up to a certain extent of separation, it certainly does not hold good in regard to the detachment, when carried to some degree further.

"There is an additional anatomical reason why the accompanying hemorrhage should be excessive, in some cases, where a very small portion of the edge of the placenta only has been separated. I have already quoted from Dr. Hamilton a case of this kind, which proved fatal, and where the 'area of the separated placenta was less than a square inch.' The largest of the maternal vessels belonging to the placenta, is that which Meckel, Jacquemier, and other authors, have described under the name of the circular sinus of the organ. It courses round the circumference of the placenta, in some parts being of a great size, and at other points more or less contracted, or even absent. I have usually found this maternal placental vessel of great dimensions in several different parts of its course. In the cases in which excessive hemorrhages occur, when a small portion only of the edge of the organ is detached, I believe the danger and fatality of the result are to be ascribed to the fact that some portion of the course of this large circular sinus has been opened, and thus a rapid and free tide of maternal blood allowed to escape from the disrupted part of this uncontracting tube.

"In all instances, then, of hemorrhage from partial separation of the placenta, I hold that the blood issues principally, if not entirely, from the uncontracted and uncontractible maternal orifices that belong to the external surface of the separated portion of the organ, and that the maternal blood is supplied more or less freely to these orifices, in consequence of the free communication existing among the different maternal cells, and from these cells being kept filled with blood through the utero-placental vessels of that portion of the placental mass which continues to remain fixed and attached to the uterus.

"Further investigations will probably show that the greatest quantity of blood that escapes flows from the exposed orifices which lie nearest to, or are actually involved in, the line of separation between the placenta and uterus. Along this line of separation, and in its immediate neighborhood, these orifices, consisting mainly of apertures in the large and torn *decidual* veins, will be for a time kept more stretched and patulous than in the other portions of the detached surface; and more especially will this hold true, if there exist any tendency in the uterus to detach itself more and more from the placental surface along this line of junction, by constant contractions. Under such circumstances, the placental orifices alluded to, and those in their immediate vicinity, will afford not only the freest, but also the nearest channel for the discharge of the mother's blood flowing into its maternal cells.

"In cases of partial detachment of the placenta from the interior of the uterus, the attendant degree of hemorrhage is also, no doubt, regulated by another important circumstance, namely, by the condition of the blood itself in the separated portion of the organ. If the blood in the maternal cells of that portion continues still to remain fluid, it will be ready to escape from every ruptured orifice upon the detached placental surface. Hence, when a considerable portion of the placenta is at once and suddenly separated, the discharge is sometimes excessive, until the blood in the tissue of the detached part becomes more or less coagulated. Gradually, by its coagulation and infiltration into the structure of the separated portion of the organ, it obstructs the maternal cells of that part, and consequently more or less completely arrests the discharge.

"It is, in fact, to this infiltration and coagulation of blood in the detached portion of the organ, that we are, as Gendrin has well shown, to look for an explanation of the occasional temporary cessations of those floodings which are so frequently observed during the latter periods of utero gestation, in cases of *placenta prævia.* It is well known that when the placenta presents, hemorrhage is liable to occur at intervals, for days and weeks, or even for months previously to the completion of the full term of pregnancy. Each of these hemorrhages depends upon a partial detachment of the expanding surface of the *cervix uteri* from the unexpanding surface of the placenta. For the expansion of the cervix uteri, during the last periods of pregnancy, is known to produce its detachment from the placenta, when the placenta is implanted upon it, exactly in the same way as the contractions, or rather retractions, of the same part during labor, lead to a similar result.

"Each partial detachment occurring during pregnancy gives rise to the exposure of a greater or less number of vascular placental orifices, and consequently to greater or less degree of hemorrhage from these orifices. Each of these hemorrhages generally ceases after a time, and the mechanism of their cessation is not so much to be found in any changes in the corresponding part of the uterus as in the changes I have adverted to as occurring in the separated portion of the placenta. The blood becomes infiltrated and coagulated in the substance, and occasionally also upon the surface, of this separated portion; its vascular maternal cells are thus rendered impermeable; and the temporary arrestment of the flooding is consequently effected. The blood diffused and infiltrated into and upon the detached portion of the placental structure, undergoes a series of changes which I have elsewhere attempted to trace minutely; and, after a time, the separated and ecchymosed tissue of the placenta itself becomes yellowish and atrophied, partly from the alterations which occur in the blood infiltrated through it, and partly from the obliteration of its vessels, and the consequent degeneration and desiccation of its tissues. In cases of *placenta prævia*, in which there has been a repeated recurrence of hemorrhage, and as frequent an arrest of it, we can occasionally trace in the placenta, after its expulsion, different parts of it, showing a series and gradation of pathological changes arising from successive partial detachments, and successive apoplectic infiltrations and obliterations of its substance from coagulated blood of different ages lodged in its structures. These alterations are confined to the detached portion, and the part always presenting the most recent stage of the pathological changes in question, is that lying nearest the line of junction, between the separated and affixed division of the organ. The part showing the most advanced stage of the changes, will be found situated furthest from this point; or is, in other terms, the part which was first and earliest detached. In cases of direct and central implantation of the placenta over the os, the centre of the organ having in general become first detached, will be found to present the oldest morbid alterations; and the newer forms and phases of it may be sometimes traced in successive departments or layers, from this to the circumference of the detached portion, always supposing there has previously occurred a succession of detachments and attacks of hemorrhage. If the edge only of the placenta has presented, and several successive hemorrhages have in the same way taken place previously to labor, the same series of morbid changes will be found in the organ, running, not, as in the above instance, from the centre towards the circumference, but from the presenting or earliest separated point of the edge, more or less towards the centre of the mass.

"As affording some proof of the correctness of the view which I have already ventured to give of the immediate source of the discharge in unavoidable hemorrhage, I would beg to dwell for a moment on one other point. Almost all obstetric authors mention, as a mark of diagnosis during labor, between unavoidable and accidental hemorrhages, that in the first or unavoidable species, the flooding is greatest during the pains, and least during the interval; whilst in the latter or accidental form, the discharge is least during the pains, and greatest during the intervals. In placental presentations, 'the character of the hemorrhage (says Dr. Rigby, p. 255, *System of Midwifery*) is also different from that of common hemorrhage, inasmuch as it increases during a pain and diminishes or ceases during the intervals, whereas in hemorrhage under ordinary circumstances it is the reverse.' I am not aware that any solution has been hitherto attempted of this peculiarity in unavoidable hemorrhage. And, whilst it seems very inexplicable, upon the idea generally received that the discharge comes from the exposed surface of the uterus, it is a condition which we might have *a priori* anticipated from the opposite opinion, that the effusion flows from the detached surface of the placenta. For, if in *placenta prævia* the hemorrhage proceeded from the vascular orifices laid open on the interior of the uterus, it ought to be diminished and not increased in quantity during the pains, as these orifices will necessarily be temporarily diminished under the contraction of the uterine fibres. If we adopt, however, the other view, that the discharge proceeds from the open vascular orifices existing on the outer or maternal surface of the detached portion of placenta, we can easily understand how its amount should be temporarily augmented by each labor pain. For each uterine contraction, in pushing down the presenting part of the child against the compressible placental mass, will squeeze out from its maternal cells, as from a sponge, a portion of the fluid blood contained in them; and hence, during the pressure, an increased flow of this blood will issue from the vascular orifices opening upon its detached surface. During the intervals between the pains, a re-accumulation of maternal blood will take place in the interior of the placenta; but the quantity actually escaping will be comparatively less, till again it is forced out in accumulated amount by the compression to which it is subjected by a returning pain."

The theory may be wrong, but the practice which *seems* to be based upon it is not necessarily so, and it may be right.

"It is stated that in unavoidable hemorrhage, treated by turning, the death of the mother occurs about once in every three cases; thus, in sixty-one cases occurring to Drs. Lee and Ramsbotham, twenty-four mothers perished—a mortality equal to that incident to the Cæsarean section, but according to Dr. Simpson's plan, only one female in fourteen is lost. As far as the life of the child is concerned, the old practice of effecting delivery by turning certainly has advantages, since it is scarcely possible that the child can be born alive when the placenta has been completely detached for any length of time. If, after the detachment of the placenta, the delivery of the child is speedily effected, it might be born in a viable condition; but the chances in this case would be decidedly unfavorable to so favorable a termination. It may then be assumed as settled, that inasmuch as the hemorrhage is usually arrested as soon as the placenta is completely detached, the mortality in Dr. Simpson's mode of treatment is much less, as far as the mother is concerned, than where turning has been resorted to; but that in the former case, the death of the child is almost certain, whereas in the latter there exists some chance of its being born in a viable condition. The question then is this, is it better to resort *to an operation* which saves one child in four, but allows the sacrifice of one mother in three, or *to one* by which every child is lost, but by which only one mother in fourteen perishes? That the life of the mother is infinitely more important than that of the child is a question which has long been settled by American and British mid-wives; hence we do not hesitate to advise the adoption of that plan of treatment which can best insure the safety of the mother, even at the sacrifice of the child."

The following facts should be constantly before the mind of the reader in all these cases:

"1st. That the plan proposed by Dr. Simpson, is most favorable to the life of the mother, but most injurious to that of the child. 2d, That this plan is applicable only 'in severe cases of unavoidable hemorrhage, complicated with a rigid and undilated os uteri, in which turning would be impossible or hazardous; in most primiparæ; in unavoidable hemorrhage, with premature labor, and an undeveloped condition of the os and cervix; in placenta presentations, with distorted pelvis; in cases where the extreme exhaustion of the patient forbids turning, and where the fœtus is ascertained to be dead, or is premature and not viable.' 3d. That in ordinary cases of unavoidable hemorrhage, turning may be relied upon.

"In some cases the placenta only partially covers the circumference of the cervix uteri, and here its edges may be felt running into the fœtal membranes. In this case, if the hemorrhage be not severe, and if the os uteri be undilatable, it will be best to rupture the membranes, and excite the uterus to contraction. Where, however, the hemorrhage is great, and the os uteri dilated or dilatable, the hand must be insinuated into the uterus, and version effected."

We return now to the consideration of Dr. Trask's prize essay on placenta prævia. He has carefully sifted the various facts on the subject, and has thus made rather safer guides than they were in their uncertain form, when they too much resembled the dubious lights of St. Elons.

The following synopsis exhibits the numerical results in "different degrees of presentation of the placenta."

There were 169 cases of *complete* presentation.
" " 88 " " *partial* "

In the remaining cases, the degree to which the placenta covered the cervix is not stated.

Of the *recoveries*, under all modes of treatment—
119 were complete presentations.
71 " partial " or 37 per cent. partial.

Of the *deaths*—
51 were complete presentations.
15 " partial " or 23 per cent. partial,

Showing the preponderance of complete presentations of the placenta among fatal cases.

"*Is there a larger portion of fatal cases among patients delivered prematurely than among those who accomplish the full period?*"

Dr. Trask thus answers this important question:

"Omitting the cases at the third and fourth months as being miscarriages, of 137 cases occurring *before the ninth month*, 38, or 28 per cent; were *lost;* while of the 78, at *full time*, or the ninth month, 16, or 20 per cent., were *lost.* These results, so far as they go, indicate the propriety of endeavoring to carry every case to maturity, if it be possible, as a means of increased safety to the mother.

"But while the results afforded by this table, as a whole, are doubtless correct, possibly, among the cases occurring in the earlier months, there is not a fair representation of the mortality at the respective periods; for example, seven recoveries at the sixth month, and no loss. But, 'until the seventh month of pregnancy, the bloodvessels of the uterus have not attained a sufficient size to pour out blood in so great a quantity as suddenly to destroy life, though the discharge may be very profuse and produce alarming symptoms.' (Lee's Lectures, p. 362.) 'We may remark, as a general rule, and as a consolatory circumstance, that nature, if not interrupted, or when given the best chance, will almost always effect the expulsion of the ovum, previously to, or soon after the sixth month, without the manual interference of the accoucheur.' (Dr. Dewees, Phil. Med. and Phys. Journ., vol. v., p. 292.)

"Of the eleven cases in the table, *before* the *seventh month*, there was but one death, and that not from hemorrhage, but from tetanus, several days after delivery.

"Again: from the seventh *to* the ninth month, not including the latter—because in some reports the ninth month is apparently used to denote the full time — there are eighty-nine recoveries and thirty-seven deaths, or *one in three and a half;* while at the full time, as we have seen, there were sixty-two recoveries, and only sixteen lost, or less than *one in five.*

" From this it appears that, previous to the seventh month, the risk is least, and that the period of the greatest danger is between the seventh month and the completion of the term of pregnancy.

" When the case has proceeded to the end of the ninth month, though there may be great reduction of the strength from previous hemorrhages, the patient enjoys the immense advantage in almost every case of the natural contractions of the womb, to aid in the expulsion of its contents, and secure its contraction after the child is delivered. It is true that in the cases in which the child is expelled, and in many in which it is delivered by art, before the full time, expulsive pains are present to a greater or less degree; but, at the full period, they are more constant, as will appear by referring to the following cases, and comparing the two groups. In cases 5, 13, 38, 69, 70, 84, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 103, 105, 110, 111, 121, 148, 149, 162, 165, 227, 230, 236, 238, 241, 267, 276, 281, 284, 295, 300, 311, 315, 317, 321, 323, 327, 330, 332, total, 43; labor was *premature*, and more or less pain is alluded to as present; but in very many of these it is evident that there were no active contractions.

"In cases 8, 20, 34, 37, 41, 101, 159, 174, 192, 269, 280, total 11, labor was *premature*, and it is distinctly stated that there were no pains. In many others, in which no direct mention is made of the circumstance, it is quite apparent that there were none.

"In cases 2, 6, 9, 64, 65, 66, 71, 79, 85, 86, 90, 109, 124, 166, 183, 190, 193, 219, 222, 229, 241, 260, 283, 316, 329, total 25, labor was at *full time*, and pains were present.

"In cases 153, 157, 193, at *full time*, it is stated that there were no pains, and in cases 167, 172, there were little or none.

"This question has an important practical bearing: for, if it be desirable to carry the case to maturity, we must avoid any expedient for the arrest of the hemorrhage, as the tampon, which is calculated to induce uterine contractions.

Presentation of the Child.

Head, including complications with descent of funis and of hand	113 cases.
Shoulder	4 "
Arm	14 "
Arm and head, funis and leg, the foot of one and head of the other.	3 "
Funis and leg	1 case.
Unbilicus	2 cases.
Breech	8 "
Foot	13 "
Twins	1 "

"Of the remainder, the presentation is not stated; probably the most, if not all, were of the head, as is in many instances rendered probable by the context. The frequency of unnatural presentations of the child in placenta prævia has been often remarked, and is probably due to the large porportion of premature births."

We have already given our opinion on the merits of the tampon, and our opinion is adverse to Dr. Trask's.

Dr. Trask, with great industry and an admirable judgment, prepared a table of two hundred and fifty-one cases of placenta prævia, gathered from a great variety of sources; and we advise all medical readers to carefully examine all the details of that paper. We present a synopsis of the facts in the words of Dr. Trask:

Mode of delivery—(not including cases of Artificial Separation, [or Spontaneous Expulsion of the Placenta, of Tables II and III.)

There were 200 cases of *turning*.
" " 141 recovered.
" " 59 died, or *one in three and four-tenths*.

"The average mortality of cases of turning, according to Prof. Simpson, (*Lond. Lancet*, 1847, vol. ii. p. 381,) is *one in two and nine-tenths*.

There were 50 cases of *spontaneous delivery*.
" " 43 recovered.
" " 7 died, or *one in seven, and one-seventh*.
" " 12 cases delivered by *craniotomy*.
" " 11 recovered, cases 6, 7, 12, 17, 37, 38, 39, 57, 59 180, and one of Dr. Lever's.
Died, case 206.

"There were four delivered by *forceps*; all recovered. Cases 5, 99, 123, 124.

"In Cases 10, 11, 195, delivery was "forced;" the first two recovered; the last died.

"In Cases 101, 113, the fœtus was grasped and brought down; both recovered.

"In four, the mode of delivery not stated; two recovered, and two died. In Cases 9 and 152, the breech was brought down. In Cases 197, 219, 221, 245, 250, the patients died undelivered.

"Of a total of 236 delivered by artificial aid, 172 were saved, and 64 lost, or about one in three and seven-tenths (3 7-10).

"Under the head of spontaneous deliveries, are included several in which ergot was given, and others in which the membranes had been ruptured or the tampon employed.

"Those delivered without manual aid (in extraction) seem to have been of a less severe character than the other class. The hemorrhage, previous to delivery, was less severe in the cases, as a whole, in which delivery was effected by the expulsive powers of the womb, than in cases that were assisted by art.

Degree of Hemorrhage in different classes of Cases.

"Among *recoveries* after *turning*, *craniotomy;* &c., the hemorrhage, previous to delivery, was so severe as to render the danger very threatening in . . . . 84 cases.

"It was "considerable" in . . . . 18 "
" "moderate" in . . . . 12 "

"In sixty-two of the eighty-four, the constitutional symptoms are stated as indicating great danger to life.

"Among *deaths* after *turning*, *craniotomy*, &c., the hemorrhage, previous to delivery, was noted as

Very urgent in . . . . 44 cases.
"Moderate" " . . . . 3 "
"Considerable" in . . . . 1 "

"Of the forty-four, in thirty-four the depression was expressly noted as extreme. Of the three in which hemorrhage was "moderate,' case 187 died very unexpectedly; case 227 was very weak and delicate, and died of fever; and case 202 was one of partial presentation, and died at a remote period.

"In cases 192, 210, 215, 223, 226, 229, 244, the patients were apparently *in articulo mortis* at the time of delivery, and in 193, 203, 242, 251, they were apparently far advanced toward a fatal termination. It may be thought by some that such cases should be rejected in a consideration of different modes of treatment, as they all proved fatal; but a reference to Cases 13, 37, 38, 58, 60, 61, 69, 83, 90, 106, 108, 138, 143, 145, 165, 181, in which the patients recovered from a state of extreme depression, and some of whom appeared to be dying at the time of delivery; will, we think, satisfy such that the cases referred to should be restrained.

"Among *recoveries* after *spontaneous delivery*, the hemorrhage had been very great in . . . . 16 cases.

"Considerable" in . . . 6 "
"Moderate" in . . . 4 "

"Among *fatal cases* after *spontaneous delivery*, in cases 201, 213, 231, 238, 242, the bleeding was very severe. In cases 200, 230 it was apparently moderate.

"If, now, we compare the 84 in which the hemorrhage was 'very severe,' among the recoveries after artificial delivery, with the 12 in which it was 'moderate,' we find the cases of 'moderate' bear to those of profuse hemorrhage the proportion of 1 in 8 of the whole.

"Among the fatal cases after artificial delivery, the proportion of moderate to severe hemorrhage is 3 in 47, or about 1 moderate in 16 severe.

"Comparing the 16 *recoveries* after *spontaneous delivery*, in which the hemorrhage had been severe, with the four in which it had been moderate, the proportion of the latter to the former is 1 in 5 of the whole.

"If we add to each group of 'severe' cases, in both recoveries and deaths, those in which the hemorrhage was noted as 'considerable,' we get 147 compared with 15, or *one* moderate in *a little less than eleven of the whole*, in cases requiring artificial delivery; and 27 compared with 6, or *one* moderate in *five and a half* of the whole, delivered by the unaided efforts of nature. So that in either case, there is a decidedly larger proportion of mild cases among those delivered by the natural effort.

Degree of Placental Presentation in different Classes.

"Among the *recoveries* after *spontaneous expulsion* of the child, we have 20 cases of *partial* presentation of the placenta, viz: Cases 4, 23, 26, 32, 36, 44, 45, 46, 55, 62, 94, 95, 102, 110, 118, 119, 159, 171, and two of Dr. Lever's; and 10 cases of *complete* presentation, viz: Cases 52, 56, 70, 84, 114, 140, 169, 170, 173, 174, or 66 per cent. *partial.*

"Of the *fatal* cases of spontaneous delivery, there was

"1 case *complete*,
"4 *cases *partial*, or 80 per cent. *partial*,

"Of the remaining cases, being *recoveries* after *artificial delivery*, there were

"46 cases of *partial*,
"and 84 " *complete*, or 35 per cent. *partial.*

"While of *fatal* cases after *artificial delivery*, there were

"12 cases *partial*,
"45 " *complete*, or 60 per cent. *partial*.

"These figures show that among cases of spontaneous expulsion of the child, there was a much larger proportion of *partial* presentations than among the remaining cases, and as a consequence less serious hemorrhage, and therefore a lower rate of mortality; and not, as at first sight appears, that cases let alone are better situated for a favorable termination. This affords an illustration of the need of a critical analysis of cases, when we seek to learn their bearings upon different modes of treatment."

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*Of these four cases, Case 201 died on the fifteenth day of pneumonia and plebitis; Case 230 died of hemorrhage after delivery; Case 238 ceased to bleed after rupture of the membranes; Case 242 was moribund when visited.

Condition of the Os Uteri at time of Delivery.

"Among the *recoveries*, in 22 the os was fully dilated.
" " " " 72 partially so, but yielding.
" " " " 19 " dilated, but rigid and unyielding.
" " " " 4 " " condition not stated.

"Of the 22 *fully dilated*, 12 were delivered by *turning*.
" " " 8 " " " spontaneous expulsion.
" " " 1 was " " forceps.

"In case 101, the fœtus and secundines were grasped and brought down.

"Of the 71 *partial* and *yielding*, 60 were delivered by turning.
" " " " 7 by spontaneous expulsion.
" " " " 3 " forceps.

"In Case 113, the head was brought down by the hand.

"Of the 19 in which the os was *partially dilated* and *right*,
6 were delivered by craniotomy.
13 " " " turning.

"The four in which the os was partially dilated, but the condition not stated, were delivered by *turning*.

"Of the *fatal cases*, in 17 the os was fully dilated.
" " " 13 partially dilated and yielding.
" " " 9 " " " rigid.

"Of the 17 *fully dilated*, 16 were delivered by turning.
" " " 1 was " spontaneous expulsion.

"Of 13 *partially dilated* and *yielding*,
12 were delivered by turning.
1 was " spontaneous expulsion.

"Of 9 *partially dilated* and *rigid*,
1 was delivered by perforation.
7 were " turning.
1 was 'forced.'

"A comparison of the 17 fatal cases with the 22 recoveries, when the *os is fully dilated*, exhibits the evil effects of delaying delivery too long, or until the womb has become fully dilated. Of the 17 fatal cases it will be observed that turning was performed in 16, and in one there was natural delivery; of the 22 that recovered, 8 were spontaneously expelled, and 14 delivered by manual aid. Now the total deaths in Table I. are few, compared with the total recoveries, while the deaths with a fully dilated os outnumber the recoveries with the same condition of the os; throwing out the spontaneous deliveries in each, which, we have already seen, bear a larger proportion among recoveries, and for reasons which we have shown. In other words, of cases of complete placental presentation allowed to remain undelivered until the os uteri is fully dilated, more will die than recover, though of cases delivered at a proper time, the reverse is true; for of the *eight* cases of *spontaneous expulsion* with a *fully dilated os*, that recovered, *six*, viz: Cases 26, 110, 118, 149, 152, 171, were noted as *partial* presentations. Case 164 was apparently partial, and Case 170 though noted as complete, was of a mild character, there being no constitutional symptoms indicating great loss of blood.

"The importance of delivery in placental presentations, so soon as the state of the os uteri will permit the introduction of the hand, cannot be too strongly urged. That eminent practitioner, Dr. Valentine Mott, in a communication with which he has favored us, says: 'I have seen and been engaged in a number of cases of placenta prævia in the course of my long practice. In every case in which there was interference at a sufficiently early period, the mother has been always saved and with a few exceptions, the child also.

"'It is impossible for any one but an experienced practitioner to know at what time we are to interfere. General directions can be given as in cases of hernia, but they must be seen to be judged of correctly. Most of the cases fatal to the mother arise from not being seen soon enough, or delay on the part of the practitioner. I have known a number of instances in which both mother and child have been lost from delay; and quite lately a case occurred in this city in which both mother and child were lost. The practitioner was urged by two others not to put off the delivery, but he did until the mother was too far exhausted. My plan has been to pass the hand by the side of the placenta rather than go through it.'"

The following facts are of great value:

"The patient's prospects of recovery are materially affected by the condition of the os uteri during delivery; and its imperfect dilatation under certain circumstances, is the chief condition for which the artificial separation of the placenta has been recommended in place of delivery by forced dilatation. It would seem that we might safely assume, that delivery effected by a forcible dilatation of a rigid and unyielding os uteri, must expose a patient to greatly increased risks. There is no branch of the subject involved in so much difficulty as the proper mode of procedure in such cases. The rule to deliver as soon as the os will permit, is well established; but in some cases, as will be seen by a reference to the table, most alarming hemorrhage has come on when the os has been even apparently closed, or just admitted the tip of the fore-finger, the placenta completely covering the internal surface of the lower segment of the womb. In other cases, the cervix is found thick, rigid and undilatable, but partially open, and the blood streaming forth in rapid flow. The practice, in these cases, has been to dilate the cervix by a gradual but forcible introduction of the hand, and removal of the child. The difficulties attending such a procedure must be evident enough from reading the details of some of the cases delivered in this manner; and one cannot leave the perusal of their histories without increased admiration of the recuperative powers of Nature which alone could sustain a patient under so great an accumulation of evils.

"Dr. Rigby in his *Essay*, pp. 38, 40, 47, urges the necessity of waiting until the uterus is in a state *capable* of *dilatation*, not waiting, however, for its actual open condition; and thus in Cases 83 and 89, though the os was apparently closed, or nearly so, he effected delivery with safety, because the os was dilatable. He had seen in the practice of others the evil effects of undertaking the operation before the parts should be prepared; and even if contractions of the neck come on during delivery, opposing an obstacle to the mechanical dilatation, he advises the practitioner to wait 'until the parts become relaxed by pains or discharges' (p. 41), watching the patient continually."

"Dr. W. H. Crowfoot, in some very judicious remarks in the *Prov. Med. and Surg. Jour.*, 1845, p. 674, says: "Of the 14 cases of complete placental presentation, to which I have been called, in my own private practice, or in consultation with other practitioners, 11 were delivered by turning, as soon as the os uteri had become dilated to the size of a shilling, and was found dilatable. Of these 11 cases, not one mother was lost. The 12th was early delivered by a very careful and experienced practitioner, but the mother subsequently died of hysteritis. The 13th and 14th I did not see till the labors were far advanced, and the patients almost exsanguined: both were delivered; both with the child perished.' He insists that the safety of the patient depends in a great measure, on the very gentle and gradual manner in which the operation is performed, particularly the first steps of it. If the practitioner go to work slowly, he will succeed; if under the influence of alarm, or of an undue haste to get over a troublesome case, he should use undue violence, the consequences will be disastrous.

"Dr. Ashwell, in *Lond. Med. Gaz.*, 1845, p. 1197, in opposing the plan of treatment recommended by Dr. Simpson, asks if the placenta can be separated from the 'developed, and highly vascular cervix,' without risk, why may not one finger, used as a dilator, make way for the introduction of a second, and a third and eventually of the whole hand, for the process of turning? 'I have often commenced the process of dilatation when the ring of the os uteri has seemed as hard and as rigid as cartilage, and yet, in no instance have I failed, and generally in a moderate time, to accomplish a full and safe dilatation, thus affording to the child at least, and, as I think, to the mother also, a higher chance of life, and greater immunity from danger.'

"But 'Mauriceau remarked,' says Perfect, 'that when the orifice of the womb was soft, and thin, and equal, the patient generally recovered; but if the contrary, she often died.' This was in cases at the sixth and seventh month. 'Peu is of the same opinion, and pronounces death, from his own experience, when violent force is in such cases employed to dilate the os uteri.'

"Naegelè mentions cases of placenta prævia in which the child was turned and delivered with perfect safety, but a constant dribbling of blood persisted after labor, resisting all efforts to check it, and on *post-mortem* examination, 'he invariably found the os uteri more or less torn.'"

In classifying *recoveries* and *fatalities* in which the os uteri was *rigid* and *partially dilated* or *rigid*, the mortality is found to be one in three and one-ninth. "Of the nineteen recoveries, thirteen were delivered by *turning;* of the nine deaths, eight were delivered by *turning;* of the *seven* cases delivered by *perforation*, only *one* was lost. This shows plainly that diminishing the size of the head, when the os uteri will not allow its ready passage, is a safer process than to attempt to practice artificial dilatation, and deliver by force; and it accounts for the comparatively low mortality just stated. In fact, of the total of the cases delivered by perforation in table I—twelve in number—*one only was lost.*" These are important truths that should be in the field of vision before the practitioner, in all cases of placenta prævia.

Where the os uteri continues rigid, the hemorrhage is going on, and delivery can only be effected by imprudent force, the embarrassment of the medical attendent is necessarily very great. Three methods of mitigating the danger are suggested: "First, rupture of the membranes; second, the introduction of the plug; third, administration of ergot." The rupture of the membranes, in its last aspect—a partial presentation—is a dubious measure, in its general result; in complete presentation, it may almost be regarded as a failure. Ergot may do for a crutch; it should never be regarded as a staff in these cases. Stimuli should precede its use. Dr. Murphy says, very forcibly: "Opium is of the highest value in saving patients from the consequences of extreme flooding—ergot in *preventing such* hemorrhages." This judicious distinction should be remembered. Dr. Fountain, of Peekskill, New York, says: "To secure a *constant pressure* on the placenta, and thereby to stop the flow mechanically, I gave a full dose of *ergot*. It always produces one constant, pressing pain." In his cases, "the effect lasted half an hour; then the hemorrhage began to return; *but I had gained* on the os; so, to secure a further relaxation, I repeated the ergot, and with the same success. At the end of another half hour, I found the os so far dilated, that I concluded to proceed. I bored my hand quickly through the placenta, turned the child, and as my hand came down, I detached the placenta, and quickly brought all away together. Success was complete—both children were living." We published similar cases in 1838. In both cases the ergot was used in this way: both were twin cases, one at the sixth month, the other near maturity: in both cases the mothers were saved; in the latter, the mother and both children were saved. Dr. Fountain's principle is one of great importance, for which he deserves much credit—*the use of ergot as a means of overcoming a rigid os uteri*, for that rigidity is one of the most serious complications of unavoidable hemorrhage.

THE TAMPON. While the os is undergoing the softening process and there is *complete placental presentation*, the tampon is to be regarded as a most useful agent. Let the practitioner always remember as a *sine qua non* for its successful use that *the pressure made by it must be as efficient as possible*, for it cannot be too constantly borne in mind that *inefficient pressure promotes hemorrhage.*

The general result upon the child is seen in the fact of a total of ninety-six saved and one hundred and sixty-six lost, or 1 in 2.7 of the whole saved.

Spontaneous Separation of the Placenta before the birth of the child, and expulsion.

Of 36 cases of this character, the result is mentioned in 29 cases, and there were but *two deaths*, one eight days and the other twelve days after delivery, and both died of diarrhœa. One striking fact is mentioned: "*Cases in which the placenta is expelled before the birth of the child, as a class are characterised by a tonicity of the womb and a vigor of uterine contraction, which we do not find in ordinary cases of the accident.*" Upon this fact, and the success that attends it, the assumption is made that similar ends may be accomplished by *artificial separation* of the placenta. It is not safe to carry that assumption to any great length. The statistics of artificial separation show a mortality of 1 in 3.95, which is precisely the same mortality established by Dr. Trask's first table in which the presentation of the placenta is noted. "The gross mortality after artificial separation is somewhat less than the general mortality, under ordinary modes of treatment, and especially less than after turning; but it is very much greater than after *spontaneous expulsion of the placenta.*"

Inquiries upon this Department of the Subject.

In order to guide medical practitioners to discriminating views, and to guard them against the sin of generalization in these cases, we shall inquire very fully into the results of statistics upon the doctrine of *artificial separation of the placenta* in cases of unavoidable hemorrhage.

Dr. Trask's tables embrace 353 cases, and after excluding cases which do not bear upon the general result, "we have *forty-seven recoveries and thirteen deaths, or one in four and two-sixteenths* as the gross mortality after *artificial separation;* while that after *spontaneous separation* is a trifle less than *one in fourteen.*

Dr. Simpson states in the *London Lancet* for 1847, that in his table of 654, 421 patients were delivered by turning, of which 144 died or 1 in 2.9.

Presentation of Placenta.

30 cases *complete*.
5 " apparently complete.
3 " nearly "
4 " partial, or 35 complete, 7 partial or 16.6 per cent. only *partial*, whereas in the first class, among recoveries, 37 per cent. were partial; and among deaths, 23 per cent. partial.

Hemorrhage before Separation.

This was in 62 cases, 'severe,' 'very urgent,' 'profuse &c.

This was in 3 cases 'considerable.'
" " 1 case, 'moderate,' or 1 moderate in 66 cases.
In the 1st classification we had 1 in 11 of the whole moderate.

Mr. Bennett states that his friend Wm. Bland informed him that for 25 years his practice had been, "as soon as the dilatability of the os would permit, to separate the placenta and extract it, and place it in a hand basin of warm water at 98°," and he says, "the results have far exceeded his most sanguine expectations."

Dr. Trask adds, very encouragingly in reference to separation of placenta:

"We have shown that among the cases in which this operation has been thus far performed, there was a larger proportion of severe cases than could be found among an equal number of cases in our first class, and which were subjected to ordinary modes of treatment; and notwithstanding this, the loss of life among them was less than after the ordinary modes of treatment. But even if this diminished mortality did not so distinctly appear, we have the important fact demonstrated beyond reasonable doubt, that entire separation of the placenta is followed in almost every instance, by cessation of hemorrhage, and that in a majority of cases the cessation is instantaneous and complete. Furthermore, it does not appear that the operation is attended by any peculiar difficulty, or that it exposes the patient to any especial danger This knowledge affords the assurance that we have a precious resource, where delivery by other means is unadvisable or impracticable.

"Why then, it may be asked, should it not always be resorted to when the placenta presents? Were the mother's safety alone consulted, there can be little doubt that an early suppression of the loss of blood would convert the most of such into cases of simple labor; but we have shown that when the placenta has been detached, almost immediate delivery is necessary to secure safety to the child. Hence, in cases permitting immediate delivery, there can rarely be a necessity for detaching it entirely, when a partial separation will allow the introduction of the hand for turning.

"In those instances of rigidity of the os uteri, in which the flooding is dangerous and uncontrollable, as, according to experience, it frequently is, this must prove a most valuable expedient, as is shown by a mortality of 1 in 5.5, compared with that of 1 in 2.4 after turning. Again, in cases of extreme prostration, in which immediate delivery by turning would be hazardous, and yet the hemorrhage continues, the detachment of the placenta may be resorted to with almost a certainty of its putting an end to the loss of blood, and thus affording an opportunity for the natural powers to rally, perhaps to a spontaneous expulsion of the contents of the womb.

"To these two classes of cases it was limited by Dr. Simpson and Mr. Radford, who have been chiefly instrumental in bringing this subject to the notice of the profession; and to such it ought to be confined, if we have interpreted our cases aright."

We close with Dr. Trask's general review of the subject of placenta prævia:

"1. We have shown, that as a general rule, cases in which delivery takes place prematurely are attended with greater risk to the mother than those occurring at the full time, with the exception of those before the seventh month, which rarely prove fatal, in consequence of the undeveloped condition of the bloodvessels of the womb at that early period. The probabilities of the child being saved are probably better at full term, though this is not so distinctly shown by our statistics. Hence, if it be possible, cases in which premature delivery is threatened ought to be conducted to the full period.

"This was the advice of Mr. Kinder Wood, a successful obstetrical teacher, who was in the habit of detaching the placenta in cases of dangerous hemorrhage from its presentation. When hemorrhage comes on before the completion of the term of pregnancy, absolute rest and cold, with, in some cases, opium, should be resorted to for the purpose of restraining hemorrhage, *avoiding* the use of the *tampon* until the progress of the case indicates that extreme measures must be resorted to; for the introduction of the tampon in the cases in which it is noted was, in certain instances, soon followed by labor pains more or less effective. But when its use is determined upon, a suppression of hemorrhage may be quite confidently relied upon for a time, at least, provided its introduction be skilfully effected. In many instances, however, at this early period, the hemorrhage continues, and artificial delivery is the only resource.

"2. Most cases of *partial* placental presentation require only rupture of the membranes. By this simple expedient, the uterus is brought into active contractions, and hemorrhage restrained within moderate limits, or entirely suppressed, until delivery takes place spontaneously, as occurs in a large proportion of cases, or is accomplished by art. But hemorrhage, in cases of partial presentation, is not always thus controlled, and our first table furnishes not a few which were attended by most alarming loss of blood.*

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* Of the eight cases lost among Dr. Lever's cases, FOUR were complete and FOUR partial presentations.

"3. In cases of complete presentation, if hemorrhage does not yield to simple measures, and in dangerous cases of partial presentation, early delivery is of the first importance. To select the most favorable opportunity for this is often one of the most critical tests of a physician's skill. To do this before the os has become dilatable is to incur the risk of inflicting serious lesions upon the uterine neck, and a difficult and protracted withdrawal of the child; while, to wait unnecessarily long is to expose the patient to great hazard from unnecessary loss of blood. The rule should be to wait not for a dilated, but a dilatable condition of the os. The great source of danger in the conduct of cases of placenta prævia is the delay required to permit the necessary dilatation of the mouth of the womb; while waiting for this necessary prerequisite to delivery, exhausting hemorrhage has often taken place, from the effects of which the patient has never recovered.

"With the hope of keeping the bleeding in check during this necessary delay, the membranes may be advantageously ruptured; for we need not, in these cases, fear any embarrassment to delivery from this cause, inasmuch as the uterus is almost invariably relaxed after severe hemorrhage. The administration of ergot, under such circumstances, in the manner already described, with the view of keeping up a pressure upon the mouths of the bleeding vessels until the os should dilate, is sanctioned by the results of some of our cases in which it was employed; and although not often given, as we judge, with this particular view, it promises to be, in many cases a valuable resource. In Dr. Fountain's two cases of complete presentation, rapid dilatation took place under its repeated administration; a compression of the placenta was kept up until the os permitted the introduction of the hand for turning, and both mothers and children were saved. In this way we imitate to a certain extent, the course pursued by nature in spontaneous expulsion of the child.

"The inhalation of *ether*, in one instance, quickened labor, and chloroform, in another, seemed to favor relaxation of the uterus. How far these agents, especially the latter, may prove subservient to this important object experience has not yet determined.

"4. But whatever means may be resorted to for keeping in check the flow of blood while the os is undergoing dilatation, the physician should not leave his patient after that process has begun. Dangerous, and even fatal flooding sometimes takes place even when the os is yet undilated, as happened in a case recorded by Smellie. Dr. Rigby laid down the rule, that the patient should not be left by her physician after the placenta was discovered to be presenting. This rule he afterwards modified, as the interval in such cases is too long to justify the sacrifice of time. But the physician should remain beside his patient until active hemorrhage has ceased; and if dilatation is in progress, it is imprudent to leave the bedside until delivery has been effected. It has occurred in the experience of every physician to be surprised by the unexpectedly sudden dilatation of the os in some cases of ordinary labor. On reading several of our cases, it is very apparent that from a neglect of the precaution here urged, the physician failed to be at hand when sudden and fearful hemorrhage took place, followed by perilous and even fatal exhaustion. Such sudden losses of blood are not uncommonly accompanied by a degree of dilatation of the os uteri that would render immediate delivery admissible, as in Case 69, from Rigby.

"It corresponds with the experience of those who have had the largest opportunities for observation, and is an inference certainly warranted by a general survey of our cases, that of patients who enjoy intelligent and active medical assistance from the commencement of hemorrhage until the termination of labor, a very large proportion are conducted through their perils in safety, and no inconsiderable portion of the children are saved. An early delivery by turning has been sanctioned by long experience, as the best general mode of treatment for securing safety to mother and child.

"But in some instances, hemorrhage will not yield to the means thus far recommended, and the os continues unprepared for artificial delivery. In these cases we may separate the placenta, with the confidence of almost certainly putting an end to hemorrhage, and with an almost equal certainty of destroying the child, unless the os should permit artificial delivery within a short time after the separation is effected. The urgency of the symptoms in such instances, is sometimes very great, and it must be left to the judgment of the practitioner, in each individual instance to determine whether to separate the placenta or wait still longer.

"6. The os may be dilated or dilatable, and the patient in a state of extreme exhaustion. Here, turning could be performed with facility, but delivery would be hazardous. In these cases the placenta may be detached with much less disturbance to the mother than would occur in turning under such circumstances, and an opportunity afforded for the patient to rally before she should be delivered. Table III. affords several instances in which spontaneous delivery took place, after such separation and the patient recovered. Yet even in these cases, we must bear in mind that children are by no means necessarily destroyed by excessive loss of blood by the mother; and a resort to the stethoscope would doubtless often prove of great assistance, where in doubt as to the propriety of detaching the placenta. When we have satisfactory evidence that the child is dead, there can be no objection to an early resort to the separation of the placenta.

"We have not entered into the controversy respecting the source of of hemorrhage in placenta prævia, because our statistics furnish but little, and that contradictory, evidence on the subject. In Case 332, Dr. Bland felt the hemorrhage proceeding from the uterus, and in another case it was felt to come from the placenta. Those interested in investigating this point, will find in Dr. Murphy's *Lectures* an interesting *résumé* of the arguments drawn from the structure of the placenta, and its connection with the uterus, by which its placental origin is advocated; and in the communications of Drs. Lee, Chowne, and Ashwell, in vol. ii. of the London *Lancet* for 1847, the considerations in favor of the belief that it proceeds from the mouths of the exposed uterine vessels. Our own opinion is that it proceeds from both these sources, but mainly from the womb. Borrowing the language of another, the unequal separation of the uterus and placenta prevents regular uterine contractions; hence, the large vessels of the exposed uterine surface pour out their blood, and relief is effected by a total separation, and a consequent regular and general contraction of the organ closing up their bleeding mouths.

"In conclusion, it is proper to remark that, in the preparation of this paper, we have been influenced by no partialities in favor of any particular measures, but have sought to give a faithful and honest interpretation of the facts presented. Some errors of reference to particular cases may have crept in, but the numerical results are believed to be correct.

"A portion of the *results* of the tables may be regarded by some as more curious than practical; but the object in presenting such has been to afford a test of the correctness of others which are of practical value, inasmuch as the greater the number of instances in which we can show a correspondence of particular statements with general experience, or with other statistics, the greater the confidence we may place in the results as a whole, or on points upon which there has hitherto been a difference of opinion. It has probably surprised the reader, as well as ourselves, that cases collected from such a variety of sources, many of them very imperfect in detail, some supplying a fact under one head and some under another, should show a harmony of result as a whole. It is in accordance with the constancy which we look for in the general history of diseases and accidents, as well as in the other operations of nature, which, however irregular and uncertain they may appear, are regulated by laws which, unseen in the case of individuals, become more or less apparent when we consider large numbers. Upon our confidence in this uniformity, the whole fabric of vital statistics is based. In not a single instance have our cases yielded to our queries an answer contrary to experience, though doubtless not always affording the exact numerical proportions between groups or classes which probably exist.

"We have sought, by a thorough analysis of all the important circumstances connected with this accident, under ordinary modes of delivery, to establish a standard by which the results of other methods of treatment may be compared. We have tested by it the results of spontaneous and of artificial separation of the placenta, and have exhibited the different conditions under which the separation is effected in these two classes. Imperfect as the knowledge thus obtained must confessedly be, the results of our inquiries are submitted to the profession, with the belief that they are a step towards obtaining a more intimate acquaintance with the natural history of the accident, and with the effects of treatment."

We have thus endeavored to gather within the compass of this article the scattered experience of the profession upon the management of this important presentation; a presentation with which medical men may have to contend at almost any moment of their professional career. It is essential that ALL the varying observations of the lights of medical experience shall be before the mind of the practitioner, in order that the proper selection shall be made of the means that will most certainly command the success which saves both mother and child. The plan of Dr. Fountain, a combined use of the ergot and tampon, must commend itself to the judgment of the practitioner in almost all of these cases, while that of Mr. Bland, recorded by Dr. Bennett scarcely deserves any credit. What can be the philosophy of immersing the extracted placenta in a basin of water at a temperature of 98°? We are at a loss to know what benefit could result from that practice. It looks like hydropathy in hot pursuit of a subject for experiments. The discriminating practitioner will, however, have no difficulty in reaching proper conclusions from the data presented before him in this resumé of Dr. Trask's creditable and valuable Prize Essay. C. S B.

ART. II.—*Physical Exploration and Diagnosis of Diseases affecting the Respiratory organs: By* AUSTIN FLINT, M. D., *Professor of the Theory and Practice of Medicine in the University of Louisville, &c;* 8vo., pp. 636. Philadelphia, Blanchard & Lea, 1856.

THE above is the title of a very handsome octavo just issued from the press of the well known establishment of Blanchard & Lea, to which the profession in America are indebted for the attractive form in which much of its solid literature appears at the present day. The author of the volume before us is not unknown to the profession, having acquired a reputation both as teacher and author. The subject treated of is one of great importance, demanding our closest study and investigation. Under such circumstances the profession no doubt will anticipate a standard medical work; and in this anticipation we think they will not be disappointed. As the title page indicates Dr. F. has divided his work into two parts, the first part being devoted to *Physical Exploration of the Chest;* the second part to *Diagnosis of Diseases affecting the Respiratory Organs.* The various subjects are arranged under appropriate heads and treated in the author's usually lucid style. The different chapters without being unnecessarily minute in regard to the subjects treated will be found quite full and complete.

Dr. Flint has acted wisely in not encumbering his work with long tables and tedious discussions upon points of minor importance; he has displayed decided good taste too, in not giving to any peculiar views of his own, an undue prominence in the work. But after these brief and desultory remarks let us give some extracts which will better enable the work to speak for itself.

"Considered as divided into lateral halves, the thoracic parietes on the two sides not only as respects the skeleton, but when invested with the soft parts, should be nearly symmetrical, so that any considerable deviations in this point of view, denote either present disease, or deformity.

"An exception relates to the semicircular measurement at the middle and inferior portion of the chest. The right side usually, but by no means invariably, measures somewhat more than the left, the average difference being about half an inch. Of 133 cases of persons in good health in which measurements were made by M. Woillez, the righ semicircumference exceeded the left in 97; the left exceeded the right in 9, and both sides were equal in 27. The greater size of the right side, as determined by measurement, is usually attributed to the presence of the liver on that side. The facts presented by the author just named, however, seem to show that it depends, in a measure at least, on the greater use of the right upper extremity, which is habitual with most persons. In no instance in which the persons were *right-handed* did the left exceed the RIGHT SIDE in measurement; on the other hand, of cases in which persons were *left-handed*, in three the left side exceeded the right, and in the remaining two cases both sides were equal."

"In the female skeleton the upper ribs are more widely separated than in the male, and they possess also, relatively, a greater degree of mobility. This anatomical difference in the two sexes has relation to the greater part which the summit of the chest takes in the respiratory movements in the female."

"In ordinary breathing, *in the male*, the diaphragm is usually the more important and indeed sometimes almost the sole efficient agent. The diaphragmatic movements are indicated by a perceptible rising and falling of the abdomen."

"Owing to the greater length of the lower *true* ribs as well as of their cartilages, and the greater acuteness of the angle formed by the union of the former with the latter, these elevation and expansion movements, *in the male*, are much more marked in the lower, than the upper part of the chest; and they are greater during the middle, than either at the beginning or the end of the inspiratory act."

"The respiratory movements in the adult female differ in a remarkable manner from those which have been described as belonging to the male sex. In the adult female the superior portion of the chest presents, in the act of inspiration, an expansion notably greater than in males, the movements of the inferior portion of the chest, and of the abdomen, being proportionably less prominent. The contrast in this respect between the two sexes is striking. 'The adult male,' to quote the language of Dr. Walshe, 'seems to the eye to breathe with the abdomen and the lower ribs, from about the tenth to the sixth; the adult female, with the upper third of the chest alone.' In other words, the breathing peculiar to females is the *superior costal* type, while in males it is associated with the *abdominal*, generally combined, more or less, with the *inferior costal* type."

"The respiratory movements, as has been seen, are abnormally increased in pregnancy, and in various affections which compromise the function of hæmatosis. When this increase is but moderate, it is stated by MM. Beau and Maissiat that the movements in one individual will differ from those in another, according to the type of breathing natural to the individual. Thus, if the type be purely abdominal, the abdominal movements alone will be increased; but if it be inferior costal, as well as abdominal, the movements of the lower ribs will be conspicuous; and if, as in females, it be superior costal, the exaggeration will be found to affect chiefly the superior portion of the chest. In cases, however, in which the sense of the want of respiration, or dyspnœa, is intense, and the breathing exceedingly labored, the three types may be simultaneously represented. But under these circumstances, the thoracic muscles more especially are brought into active requisition, and in order to effect the utmost possible enlargement of the chest, various muscles are employed which are capable indirectly of aiding in respiration. An erect or sitting posture, being most favorable for the action of these muscles, is also selected. These changes will claim attention in connection with the symptomatology of the diseases in which they are exemplified."

"Judging from a cursory examination, or from attention to one's own respiration, the act of expiration appears shorter in duration than that of inspiration. The two acts, however, as determined by the chest-measurer of Dr. Sibson, in ordinary respiration, are generally equal in duration. When a difference exists, the expiration is oftener prolonged. This is apt to be the case in the tranquil breathing of women and children. It characterizes also the respiration in old age. In hurried breathing, in females especially, the expiratory act becomes relatively lengthened.

"Neither the inspiratory nor the expiratory act is performed with a uniform degree of rapidity. The inspiration is at first slow, becomes gradually quicker, and again is retarded toward its close. The expiratory act is performed more quickly at first, and during the latter part more slowly than the inspiratory. These facts will in a measure account for certain differences in character which distinguish the expiratory from the inspiratory sound as determined by auscultation in health and disease."

Other extracts might be taken from the chapter on the *Anatomy and Physiology of the Pulmonary Organs*, but these may suffice. The object of the author is evidently not to give the minute anatomy of the parts; but merely an outline description, noticing more particularly those anatomical and physiological facts, which have a bearing upon the subject in hand.

The following extract from the first chapter on *Physical Exploration of the Chest,* will show how minutely the whole subject is investigated:

"The following are the different methods of physical exploration:

"1. Striking the chest with the finger or an artificial instrument in order to determine any deviations from the sounds which are elicited by this process in a condition of health. This method is called *percussion.*

"2. Listening with the ear applied directly to the chest, or through a conducting instrument, to discover morbid sounds produced by the movements of the air in respiration, or by the acts of speaking and coughing. This method is called *auscultation.*

"3. Examining the chest with the eye, to see if there are any changes in form or symmetry, and if the visible motions are natural. This method is called *inspection.*

"4. Applying the hand to the chest, to ascertain whether any abnormal sensations are appreciable by touch, due to the movements of respiration, and more especially the act of speaking. This method is called *palpation.*

"5. Measuring the chest, or parts of the chest, by means of a tape, or graduated measure, to obtain accurate information of alterations in size and mobility. This method is called *mensuration.*

"6. Shaking the body, to develope sounds produced when liquid and air are contained in a cavity, which occurs, occasionally, as the result of disease. This method is called *succussion.*

"The phenomena resulting from the six methods of examination just enumerated, are called *physical signs,* in distinction from the ordinary symptoms of disease, and the latter are sometimes styled *rational, vital,* or *physiological* symptoms. Each of these epithets, as contrasted with the term *physical,* has a certain significance. But the two last are more appropriate than the first, which implies an error, to be noticed presently. The words *signs* and *symptoms,* are often used without any adjective, the first to denote the *physical* and the second the *vital* or *physiological* phenomena of disease. It is convenient thus to employ these simple terms, and there can be no objection to attaching to each the distinctive sense just mentioned, in conformity with conventional usage."

A single quotation from the chapter on *Percussion* will show the mode of performing percussion as recommended by the author; while an extract or two will exhibit the various morbid conditions which give rise to diminished resonance, or dullness:

"In some rare instances a disproportion between the solid structures and the air takes place as the result of the reduction in the quantity of the latter, the former not being increased. An obstruction may exist from the presence of a morbid product or a foreign body within the bronchial tubes, which resists the ingress of air to the cells with inspiration, but permits its egress with expiration. Collapse of more or less of the pulmonary lobules, under these circumstances, may follow. The effect on the percussion-sound is to diminish the normal resonance, which depends, *cæteris paribus*, on the quantity of air contained in the pulmonary vesicles. In the vast majority of cases, however, this effect is due to the increase of the solid contents of the chest, which occupy space to the exclusion of air.

"A thin stratum of liquid between the pleural surfaces, serum, or serum and coagulable lymph, in hydrothorax and pleurisy, may occasion more or less dullness on percussion. This is an infrequent cause, the quantity of liquid effusion and fibrinous exudation generally being so disposed, and in sufficient quantity, to occasion total loss of resonance or flatness, over a greater or less distance from the base of the chest upward. Instances, however, may occur, in which, from adhesions of the pleural surfaces, a small quantity of these products may be confined within circumscribed limits, removing the lungs from the walls of the chest sufficiently to diminish but not destroy vesicular resonance.

"In cases in which a considerable quantity of liquid is contained within the pleural sac, the lung, of necessity, undergoes compression and condensation. Over the portion of the chest beneath which the condensed lung lies, the *vesicular* resonance is diminished, the reduction of the lung in volume increasing the proportion of solids to the quantity of air within the cells. At the summit of the chest, therefore, the percussion-sound is usually dull. But under these circumstances a sonorousness frequently exists, modified in quality, which will be noticed under the head of Tympanitic Resonance.

"A very large accumulation of morbid products within the bronchial tubes may be attended by slight dulness. This also is extremely rare. Unless the quantity be so great as not only to fill the tubes, but to distend them, and thus encroach upon the air-cells, the resonance on percussion is not appreciably lessened; hence, as will be seen hereafter, in cases of bronchitis attended with very abundant expectoration, the normal resonance is not sensibly impaired. Skoda denies that appreciable dullness ever exists in cases of bronchitis. This assertion is too positive, and does not accord with the observations of others.

"Congestion of the pulmonary vessels may exist to such an extent that the blood, occupying space at the expense of the normal capacity of the air-cells, the resonance is diminished. Moderate or even considerable congestion does not produce this effect. The engorgement must be great; a sufficient degree obtains in some cases at least of pneumonitis, during the first stage, or stage of engorgment,* and in the hypostatic congestion of the dependent portion of the lungs taking place towards the close of life in various diseases.

"The exudation of coagulable lymph within the air-cells which characterizes the second stage of pneumonitis, or the stage of solidification, occasions notable dullness. Here the cells themselves are to a greater or less extent filled with solid matter supplanting, in proportion to its abundance, the air. The dulness will, *cœteris paribus*, be proportionate to the quantity of exudation, occasionally merging into complete flatness. Certain circumstances distinctive of the solidification of the lung, which occurs in the form of pneumonitis, usually presented in the adult, viz: lobar pneumonitis, will be noticed under the head of Absence of Resonance or Dulness.

"Effusion of serum within the air-vesicles and areolar tissue of the lungs, is another morbid condition attended by dulness, and in some instances flatness. This condition, never a primitive affection, but generally incident, when it takes place, to disease of the heart inducing pulmonary congestion, is to be included among the infrequent causes of diminished resonance.

"Deposit of tuberculous matter within the cells is the most frequent in its occurrence of the morbid conditions characterized by the change in the percussion-sound under consideration. The mode in which it occasions diminished resonance is the same as in pneumonitis.

"Carcinomatous infiltration of the pulmonary parenchyma, fortunately extremely rare, will occasion dulness, in the same manner as tuberculous matter.

"Extravasation of blood, constituting pulmonary apoplexy, is another rare form of disease, producing the same effect in the same way.

"Tumors, morbid growths, aneurisms, and enlarged bronchial glands, are occasional forms of disease, which, according to the extent of encroachment on the thoracic space, lead either to diminution or absence of vesicular resonance.

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* This appears to be denied by Skoda; and since death rarely occurs from pneumonitis during the stage of engorgement, opportunities to demonstrate the correctness of the statement which has been made are not often obtained. In a case under my observation, in which a patient died with enormous dilatation of the heart shortly after an attack of pneumonitis, the limits of the lower lobe of the right lung had been marked on the chest by a line of obvious dulness on percussion; and this lobe after death was found in the first stage of inflamation, no solid exudation having taken place. [Hospital Record for April, 1855. case of Peterson.] The denial by Skoda is not in accordance with the observations of others.

"In each and all of these various affections, percussion alone developes nothing beyond the simple fact of the existence of some physical alteration producing dulness."

In the chapter on *Auscultation,* the following judicious remarks in regard to the performance of auscultation occur:

"In the performance of auscultation certain rules are to be observed, the more important of which may be here stated. Whenever practicable, the person to be examined should be seated in a chair with a high back, furnishing a firm support for the shoulders, which are to be thrown moderately backward when the chest is explored in front. In examining the back a stool is preferable, or if the patient be of the male sex, his position may be reversed, the face turned to the back of the chair; the body should be inclined forward, the arms folded as in practicing percussion on the posterior surface of the chest. In exploring the lateral surfaces the hands should be clasped upon the head, as when percussion is made in this situation. If the patient be confined to the bed, the chest in front may be examined in the recumbent posture, and afterward, if the disease be not accompanied by extreme debility, he may be raised, and supported in a sitting position while the examination is made behind and laterally. It is sometimes the case that patients are too feeble to endure a vertical position of the body even for a short time. Inclining the body first on one side and then on the other, a partial exploration may be made under these circumstances, by means of the flexible stethoscope. It rarely occurs, however, that when a careful examination of the back is desirable, a favorable position is impracticable. It is more satisfactory to divest the chest of all clothing, in order to judge better of corresponding points on the two sides to be explored in alternation. So far, however, as concerns the transmission of sounds this is not necessary. A single thin covering of cotton or linen offers little or no obstruction, nor is it a serious hindrance to determining often with sufficient accuracy the particular parts of the chest to be examined in succession. Several thicknesses, or a thick woolen article of dress, interferes with the appreciation of auscultatory phenomena. If a covering remain, it should be soft and flexible, so as not to occasion a rustling noise from the movements of the chest, or by friction against the ear or stethoscope. In immediate auscultation a soft napkin or handkerchief, may be interposed between the skin and the ear, in order to obviate the disagreeable circumstances often attendant on applying the head to the naked surface. A regard for delicacy prevents complete exposure of the chest of the female. The portions, however, most important in cases in which a minute and visual examination is most likely to be required, viz: the summit in front and behind, may without impropriety, be divested of the dress. The temperature of the room should be properly regulated, especially if the chest be exposed. This is important not only to obviate the liability of the patient suffering injury from the impression of cold on the surface, but to prevent a difficulty which may interfere with the examination. The action of cold on the muscles of the chest sometimes occasions trembling movements accompanied by a rumbling noise which obscures the intra-thoracic sounds, and without knowledge of this source of an exterior murmur, it might be supposed to emanate from within the chest. The position of the explorer should be one favorable for listening with attention, and which may be maintained for sometime without fatigue or discomfort. If he assumes a constrained posture his mind will be diverted from the object of the examination to his own sensations, and he will be unable to reserve his perceptions exclusively for the thoracic sounds. A stooping posture is, as much as possible, to be avoided, not only for the reason just mentioned, but because the gravitation of blood to the head induces a temporary congestion, which dulls the sense of hearing. It is not uncommon to see practitioners inclining their heads so low in performing auscultation that the face becomes deeply injected, and the veins largely dilated. I find it most convenient and comfortable to rest upon one knee. In this position the head may be placed in contact with the chest, and kept upright or nearly so. Of course these precautions have reference to the practice, either of immediate auscultation, or the use of the wooden cylinder. With a flexible stethoscope from one to two feet in length, the explorer may remain sitting by the side of the patient, the latter lying, or seated, as the case may be. This is one of the recommendations of this instrument to be placed against its disadvantages.

"The ear is to be pressed against the chest, or on the cylinder, with a certain amount of force. If the pressure be made too lightly the sounds are not transmitted, or an unnatural character may be communicated to them which may be mistaken for morbid phenomena. Thus the resonance of the voice by the non-observance of this rule, sometimes assumes a modification analagous to that incident to certain morbid conditions, constituting the physical sign called ægophony. On the other hand, if too great force be applied, pain may be occasioned sufficient to disturb the respiratory movements, or the expansion of the chest may be mechanically impeded. Attention to this point, with practice, will enable the auscultator to hit the medium between the two extremes. If the cylinder be employed, the pectoral end should be evenly applied on the chest, and held in place with the fingers of the right hand until the ear is nicely adjusted to the aural extremity. The hand is then to be removed from the instrument, which is to be kept in place by means of the pressure with the ear alone. Non-observance of this rule is one of the circumstances by which a mere *formalist* in the practice of auscultation may be detected.

In practicing auscultation it is well to accustom oneself to the use of either ear indifferently, if the sense of hearing be equally acute in both. An exploration of both surfaces of the chest can then be made without the necessity for change of position on the part of the explorer. Perfect silence in the apartment is at first necessary. The habit of mental abstraction, and the power to concentrate the attention exclusively on the thoracic sounds, are not generally acquired without more or less pains and perseverance. After a time, however, extrinsic noises are less troublesome, and an exploration may be made under unfavorable circumstances. The ability of acquiring the power to withdraw the senses and thoughts from surrounding objects is not equally possessed by all individuals, and it is owing in part to differences in this respect that some persons become much better auscultators than others. Every one accustomed to physical exploration must have observed that the facility and satisfaction with which examinations are made differ considerably at different times, owing to differences in state of mental activity, pre-occupation, etc. After auscultating for a time, the quickness and correctness with which thoracic sounds are perceived are liable to be impaired by fatigue. It is a useful caution, therefore, not to continue this kind of investigation too long. From one to two hours of continuous exploration is sufficiently long without an interval of rest.

"The acoustic phenomena revealed by auscultation relate to the respiration, the voice, and the act of coughing, the latter being comparatively of little consequence. In listening to the respiratory sounds, the manner in which the patient breathes is a matter of importance. Mental excitement or apprehension often gives rise to more or less disturbance to respiration. The breathing becomes hurried and irregular, and on this account, the examination may be unsatisfactory, or even prove abortive. In persons of great nervous impressibility it is frequently necessary to wait until calmness is restored before proceeding with, or completing an exploration. As justly remarked by Fournet, the manner and bearing of the physician have much to do with this point. If he wear a solemn mein, and favor by his looks or actions the idea that the operation is one of formidable import, he will be less successful than if he manages to divest it of repulsive features. With reference to this end immediate auscultation, in which no instruments are exhibited, is to be preferred, whenever the object can be equally well attained by that mode. It is generally desirable to cause the patient to breathe with more than ordinary force in the progress of the examination, and it is sometimes extremely difficult to effect this object satisfactorily. He accelerates the respiration, or takes a deep inspiration and holds his breath, or in different ways alters the rhythm of the respiratory acts. The end desired is simply to render the breathing somewhat more intense without change in other respects; and the best mode of securing the end is to breathe ourselves just as we wish the patient to do, requesting him to observe and imitate us as closely as possible. Another method is to request the patient to cough while the ear is applied to the chest, the respiration succeeding an act of coughing being deeper or fuller than ordinary. In some instances the respiratory phenomena are not appreciable except the force of the breathing be voluntarily or involuntarily increased. It is necessary to caution the unpracticed auscultator to avoid mistaking the noise frequently produced by the current of air at the mouth of the person examined, for sounds emanating from the thorax. The patient should be instructed to avoid making labial sounds, which by entering the ear not applied to the chest, tend to distract the attention, if they do not lead to the error just mentioned. In auscultating the voice, the plan usually adopted is to cause the patient to count from one to five, repeating these numbers as often as may be requisite, being careful to utter each numeral with the same tone and strength."

We would draw attention particularly to the remark, "In persons of great nervous impressibility it is frequently necessary to wait until calmness is restored before proceeding with or completing an exploration." It will often be found expedient, especially in females who sometimes from modesty and sometimes from fright, become much excited at the idea of an exploration of the chest, to first make a very cursory examination, and at a subsequent period, when the patient shall have become more calm, to make a more thorough and complete one.

We may here take occasion to remark, that from the clear style of the author, and the exactness with which certain sounds are connected with certain morbid conditions of the internal organs, the novice might be led to suppose that the subject presented little or no practical difficulty, that by applying the ear to the chest, he could determine with great precision all that might be going on within. But if such a notion should be entertained by the student or young practitioner, he will be most egregiously mistaken. For while it is true that in some cases the abnormal sound is so clear and uncomplicated that the merest tyro may with great safety decide upon its character; in very many other cases it is far different, even one with a practiced ear finding the greatest difficulty in analyzing the various sounds, while to one who is inexperienced, it will be mere confusion. At this point the student of physical diagnosis is too apt to become discouraged, entirely abandoning its study, and consoling himself with the reflection, that without such knowledge he is upon a footing with most of his medical brethren with whom he is likely to come in contact. In an old practitioner who has past the meridian of life, whose hearing has become obtuse, and whose opportunities have been limited, ignorance upon this subject may be excused. But one who is setting out in the profession, blessed with acuteness of the various senses, and with abundant time for study, should closely pursue this subject, taking advantage of every opportunity that presents itself, repeating his examinations in every different case, until, if possible, all doubt is removed. This course of observation and study is to be kept up too, not for a limited time, but during the whole period of one's professional career.

Chapter IX is devoted to the *Correlation of Physical Signs*, in which the author, after briefly but clearly showing the importance of studying physical signs in their mutual relations, as well as separately, arranges the *signs correlative to those furnished by percussion*, under four different heads, and the *signs correlative to sounds furnished by auscultation* under eight different heads. Here within a short space, we have collected, an amount of information, that would require much time to search out and arrange. This chapter we regard as a very important one.

"The diagnosis of diseases affecting the organs of respiration involves the practical application of the principles which it has been the object, in the preceding pages, to elucidate. In the investigation of diseases, however, at the bedside, the attention is by no means to be directed solely to signs. Invaluable as they are, their importance is greatly enhanced by association with symptoms and the knowledge of pathological laws. The results of physical exploration alone, frequently leave room for doubt, and liability to error, when a due appreciation of vital phenomena and of facts embraced in the natural history of diseases, insures accuracy and positiveness. An overweening confidence in the former is to be deprecated as well as exclusive reliance on the latter. And since the practical discrimination of intra-thoracic affections is always to be based on the combined evidence afforded by these three sources of information, in treating of the subject, it is desirable that the attention shall not be limited to one source to the exclusion of the others. In taking up, therefore, in the succeding pages, the diagnosis of individual diseases, I shall not disconnect entirely physical signs from symptoms and pathological laws. After premising a few considerations, the signs belonging to each disease will be considered; and under the head of *Diagnosis* I shall adduce symptoms and pathological laws which are to be associated with the phenomena furnished by physical exploration in the discrimination of the disease."

The observations contained in the foregoing extract taken from the preliminary remarks to Part II. are not only true, but important. With a proper knowledge of pathology, we should carefully weigh both symptoms and signs before making out a diagnosis. In some cases our diagnosis rests almost, or perhaps exclusively, upon the symptoms, while in other cases signs will furnish much more positive and satisfactory information. As a general thing we think an examination of the symptoms, including the previous history of the case, etc., should precede a physical exploration. When a physical exploration seems necessary, we should never perform it in a hurried and incomplete manner, as we are persuaded is sometimes done when the physician is wearied and disinclined to the task. Neither should we neglect it, in the uncleanly and disagreeable cases with which we often come in contact. Just here, at the first examination of a case, there is a great responsibility resting upon the medical attendant and one which we may well fear is not always properly appreciated by him; we speak from experience, having more than once regretted that our examinations had not been more thorough, and that perhaps when too late.

The following observations are found in the interesting chapter on *Pulmonary Tuberculosis:*

"Pulmonary tuberculosis, although embracing in its career most of the phenomena furnished by the different methods of exploration, has no special pathognomonic physical signs. The phenomena which it embraces belong also to other affections. They represent morbid conditions not peculiar to tuberculosis, but existing in other forms of disease. Isolated from other signs, and dissevered from symptoms, pathological laws, and associated circumstances, none of the physical phenomena which have just been considered would possess marked diagnostic importance. Nevertheless, from their combinations, their conjunction with vital phenomena and with facts pertaining to the natural history of the disease, they acquire a positive value, and are hardly less significant than if they belonged to it exclusively.

"These general remarks are alike applicable to the symptoms. The semeiology of pulmonary tuberculosis embraces a series of events which are common to this and other affections, and which, in a diagnostic point of view, derive their importance chiefly from association with each other, from coexisting physical signs, accompanying circumstances, and the laws of the disease.

"The diagnosis of pulmonary tuberculosis is based on the positive evidence of its existence. If this evidence is present, we do not call to our aid, save to a very limited extent, the mode of investigation called 'reasoning by way of exclusion.' The differential diagnosis from other affections hinges mainly on the presence or absence of the signs and symptoms which denote a tuberculous deposit. We do not, in other words, undertake to exclude other affections, but on the other hand, we direct our investigation to ascertain whether there is sufficient proof of the existence of tuberculosis. Hence it follows, that in order to make the discrimination clinically, and to decide correctly whether a patient be affected with this disease or not, the physician must be acquainted with its symptoms and signs, and understand the conditions under which they constitute positive evidence of its existence."

"As regards the comparative reliability of the diagnostic characters derived from symptoms and from signs, it is to be remarked that many of the former are only occasionally available, this is true of those dependent on tuberculous complications, viz: intestinal, peritoneal, and laryngeal. Hæmoptysis occurs in only a certain proportion of cases, albeit this proportion is large. The loss of weight and strength is not always marked, and may be due to a variety of morbid conditions other than tuberculosis. Chills and pleuritic pains are not constant events, and their significance depends on their being associated with other symptoms. The pulse is not invariably accelerated, and the respirations may not be increased in frequency. The distinctive characters pertaining to the cough and expectoration may be absent, or not readily ascertained. In short, cases of tuberculous disease by no means always offer, even after it has existed for some time, in the symptomatic characters embraced in the previous history and present phenomena, data sufficient for a probable, still less a positive opinion as to the diagnosis. On the other hand, a tuberculous deposit is rarely so small in amount as not to induce physical changes in the lung, adequate to the production of signs indicating their existence. The fact just stated, is highly important in its bearing on the value of physical exploration in this disease. A tuberculous deposit sufficient to give rise to the symptoms which lead a patient to seek for medical advice, is almost invariably detected without difficulty by careful physical exploration. On this subject the student or young practitioner is liable to derive an incorrect notion, from the stress which is very properly laid on the symptoms and signs concurring to establish the diagnosis of small disseminated tubercles. That instances do occur in which the evidence derived from symptoms and signs, conjointly, are slight, and the diagnosis is consequently attended with difficulty must be admitted; but instances of this kind are exceptions to the general rule. Of the cases of suspected tuberculosis which the physician meets with in practice, if the disease really exist, the physical signs, in conjunction with the symptoms, are positive and easily determined in the vast majority. This opinion is based upon a pretty extensive experience for the last ten years. Let the student, or the practitioner who is not accustomed to physical exploration, then, not be repelled by the erroneous idea that the diagnosis of tuberculous disease very often hinges on points so delicate and difficult to be appreciated, as to compel him to rely in most cases on the symptoms alone. This idea, which I know to be common, does injustice to the subject of physical diagnosis."

We are of opinion that tubercular deposit to a limited extent may exist in the lungs, especially in certain localities, without exhibiting any appreciable signs upon an exploration of the chest; while at a more advanced stage of the disease, the signs leave not the slightest doubt as to the existence of this deposit. The thing to be guarded against is this: Should the patient, as is unfortunately seldom the case, apply to us before we can by a close examination detect the existence of turbercular deposit in the lungs, the symptoms and previous history of the case, strongly indicating either the presence or the approach of the disease, we should not wait a moment, but act with all the promptitude which we would were the existence of tubercles in the lungs no longer equivocal.

We hope these few extracts taken from Dr. Flint's work may convey some idea of its character and importance. We would however advise every physician to at once place it in his library, feeling assured that it may be consulted with great benefit both by young and old. L. J. F.

ART. III. — *The Obstetric Memoirs and Contributions of* JAMES Y. SIMPSON, M. D., F. R. S. E., *Professor of Midwifery in the University of Edinburg, etc., etc., edited by* O. W. PRIESTLY, M. D., *Edinburg, formerly Vice President of the Parisian Medical Society; and* HORATIO B. STORER, M. D., *Boston, U. S., one of the Physicians to the Boston Lying-in Hospital, etc.;* Vol. I., 8vo., pp. 756. J. B. Lippincott & Co., Philadelphia, 1855.

THE above is the title of a ponderous volume recently issued from the American press, and now on sale by most of the medical bookstores throughout the country.

Having entertained since our professional pupilage great respect and admiration for Professor Simpson, as an eminent and successful teacher; and having occasionally, as we were able to procure them, read with profit many of his detached essays, we hailed with much pleasure the opportunity of a more extended acquaintance with his views of the pathology and treatment of various female diseases. But we are constrained at the very outset of this notice to state that a very serious draw-back to a proper appreciation of the book before us is the exceedingly immethodical manner in which its different parts are put together. This, however, is not the fault of Professor Simpson, but belongs solely to his editors and annotators. Of the papers themselves, they are for the most part valuable, but many of them are unsatisfactorily brief, some imperfect, and others deficient in such originality of thought and novelty of practical precepts as to have merited positions so conspicuous. We think that Professor Simpson, out of regard for his reputation, should have exercised some sort of supervision in their selection and arrangement. The great respect in which he is held by the profession is hardly sufficient justification for the admission of his crudities into a volume intended as a work of reference.

The paper entitled "General Remarks on Uterine Diagnosis," while it presents sound doctrines and excellent advice as to the method of diagnosing various diseases, teaches nothing essentially different from what is already familiar to professional readers in the well-known monograph on the uterus by Dr. Bennett of London, except so much as refers to the introduction of the uterine sound as a means of diagnosis. For this suggestion few will deny that Dr. Simpson is entitled to much credit. By means of the sound undoubtedly much light is thrown upon diseases that have heretofore proved, to say the least, very obscure. So fully are we impressed with its value that we cannot forbear giving in full his description of the instrument and the indications for its employment.

I have already stated that the instrument which I employ is somewhat similar to a small male catheter. It is, moreover, provided, like the common male sound, with a flat handle, to facilitate its manipulation; and terminates at its other extremity in a rounded knob or bulb, to prevent injury to the uterine textures. The intervening stem tapers gradually from the handle to the knob, the thickest part being nearly one-fifth of an inch in diameter, equal to the size of a catheter No. 8, and the thinnest part about one-tenth of an inch, or equal to a catheter No. 3. The greater thickness of the attached extremity is necessary to give that portion of the instrument the requisite degree of strength and resistance; it is more slender towards its other extremity, to allow of its easily entering into, and being moved in the orifice and canal of the uterus. The terminating bulb is about one-eight of an inch in diameter. The stem is about nine inches in length and graduated so as to render its employment, and some of its indications with regard to the measurement of the uterus, more precise. Different modes may be had recourse to in marking it, but the marks, whatever they may be, must be such that they can be easily felt with the finger while the instrument is within the vagina. For this purpose they must be placed on the convex or posterior surface of the instrument, the surface, namely, with which the directing finger is in contact. The mode of graduation adopted in the instrument I have myself used, and which is figured in the engraving, is as follows:—At two inches and a half from the extremity of the instrument, this measurement being the usual length of the uterine cavity, there is placed a slight elevation or knob, which, in the employment of the bougie, at once serves to show that it is introduced to the full extent into the interior of the organ, and at the same time forms a fixed or standard point from which the instrument may be farther graduated towards either of its two extremities. This farther graduation is marked by shallow grooves, which may be placed at the distance of either half an inch or an inch from each other, and, by their assistance, it becomes an easy matter to measure the exact length of the uterine cavity, when either it is diminished, or, as much more frequently happens, when it is prolonged to different degrees beyond its usual dimensions. The alternate groove may be double, to facilitate the measurement by the finger. The form of curvature at the extremity of the instrument is nearly that of a common catheter, and like it, begins about three or four inches from its point; but the degree and extent of this curvature require to be varied according to the necessities of individual cases, and according to the indications which it is wished to bring out. Hence the stem of the bougie requires to be formed of a metal that admits of being pretty freely and frequently bent without the risk of fracture and at the same time is capable of adequately maintaining any form that may be temporarily given to it. These objects are fully attained when the stem is made of solid silver, but probably some composition of the inferior metals may also be found to have the necessary combination of pliability and strength. The handle of the bougie is made of wood or ivory, is about three inches long, three-fourths of an inch at his broadest part, and rather more than a quarter of an inch in thickness. The posterior surface of it is smooth, whilst its anterior surface, or that corresponding to the concave aspect of the bougie, is roughened, in order to make the operator constantly aware of the direction of the point of the instrument when it is hid in the uterine cavity—a circumstance which we shall afterwards see to be of great importance in reference to some of its diagnostic uses.

Mode of Introduction.—In introducing the bougie or sound into the uterine cavity, the patient may be placed either on her back or left side. If on her back, the fore-finger of the right hand is introduced into the vagina, and its extremity brought in contact with the indentation formed in the cervix uteri by the os tincæ, so as to act as a guide to the point of the instrument. The instrument itself is held in the left hand, and its point slipped along the palmar surface of the finger in the vagina and directed by it into the uterine orifice. If the patient is placed on her side she must lie with her body directly across the bed—a position which facilitates greatly the manipulation required both for common tactile examination, and for examination by the sound and speculum. In this case the fore-finger of the left hand is used as a guide to the os uteri, and the instrument is held in and directed by the right. In some instances where the parts are very lax, and the cervix uteri in any way displaced, the introduction of the bougie is facilitated by passing both the fore and middle fingers into the vagina, fixing the cervix with them in the axis of the passages, and gliding the instrument along the groove between the two up to the os. In whichever of these ways the sound is guided up to and passed within the os uteri, it generally afterwards glides easily, under a slight propulsive force, along the canal of the cervix and body, till, as shown by the elevated mark already alluded to as placed on the stem, its extremity has passed onward to the fundus of the organ. Sometimes the extremity of the instrument is slightly obstructed about an inch or less within the os tincæ, by the natural contraction existing there between the cavity of the cervix and cavity of the body. This obstacle is easily overcome by a little additional impulse, or, if that fail, by slightly retracting and altering the direction of the point of the sound. The direction which the instrument should naturally follow in passing along the uterine canal, must always be held in view. In the normal condition of the parts, the uterus and vagina meet at a considerable angle, the former passing upwards and at the same time considerably forwards, and varying somewhat its inclination with the varying degrees of distension of the bladder and rectum. In using the bougie, therefore, supposing the organ to be in the natural position, its concavity should be directed forwards towards the walls of the abdomen; or, in ether words, it should be passed in the same direction as in most other manipulations in this part of the body, namely, in the line of the axis of the brim of the pelvis.

The degree of uneasiness felt by the patient during the passage of the instrument is in general very trifling, and not more, if so much, as is felt on passing the catheter along the urethra of the female, and certainly not by any means nearly so great as in using the sound or bougie in the male. In a few cases, I have seen it, like the passing of the sound in the male, produce a feeling of sickness and nausea. In the healthy state, however, of the organ, the lining membrane of the uterus does not in fact appear to be more sensitive than that of the vagina, so that the existence of any true and actual pain in making the examination with the bougie is to be considered so far anomal, that it is generally, as we shall afterwards see, indicative of the existence of some morbid state or other of the part or parts with which the extremity of the instrument is at the time in contact.

In the average run of cases, the introduction of the sound into the uterine cavity is probably not more difficult to accomplish than the introduction of the catheter into the bladder of the female. The os uteri is, in fact, usually much more easily and certainly detected by the finger, than the orifice of the urethra; and generally the one and the other instrument passes readily along its appropriate canal after it has once entered it. If it is otherwise, the very difficulty may be in itself important, as marking the existence of some anormal and probably diseased state. It is almost unnecessary to add, that the power of passing either instrument with perfect facility and certainity, is only to be gained by a little perseverance in the practical employment of them.

The manner in which the instrument should be manipulated, after it is fully introduced in the uterine cavity, varies according to the object or objects which we wish to ascertain. The mode of using it with these views will be best explained by now pointing out individually and at some length, the different diagnostic indications which it is capable of fulfilling.

The uses of the uterine sound as condensed from the statements of Dr. Simpson may be enumerated as follows:

"The sound increases to a great degree our power of making a perfect and precise tactile examination of the fundus, body, and cervix of the uterus."

If this is true every one will admit that the instrument is of inestimable value to the physician in cases of uterine diseases in which there are such difficulties in the way as to prevent, or at least embarrass, the diagnosis. Prof. Simpson has, in our judgement, fully sustained the premises and is therefore justly entitled to the corollary.

"2. The previous introduction of the sound facilitates and simplifies the subsequent visual examination of the cervix uteri with the speculum."

"3. By the use of the uterine sound we may in many instances of pelvic, hypogastric, or abdominal tumors ascertain the connection or non-connection of these tumors with the uterus."

In this last proposition the beautiful simplicity and almost unerring certainty of the sound is strikingly exemplified. When we wish to determine certainly the nature of a tumor in the hypogastric region and are unable to do so from the general symptoms or ordinary manipulations, the question as to its being uterine can nearly always be decided by the use of the sound. If the tumor belongs to the uterus, and consists of a hypertrophy of the walls of this organ, the sound, when made to enter the uterine cavity, will penetrate to the centre of the diseased mass, and demonstrate by the reciprocal movements of the tumor and instrument, when impelled in all possible directions, that the affection is uterine. In instances where the tumor is not connected with the uterus, we may ascertain the fact by introducing the sound, and then either moving the tumor away from the womb by the hand applied over the hypogastric region, or per vaginam; or by moving the uterus away from the tumor; or, finally, by moving the tumor and uterus in opposite directions. These movements can be readily executed in all instances except where the womb and tumor are adherent, or where, from the size of either, they are wedged so closely together in the pelvis as to render them immovable.

There are other affections in which the sound may be profitably employed, but want of space compels us to pass them by without comment. We desire however to call special attention to this subject, and believing this to be one of the most valuable of Dr. Simpson's numerous papers, cordially recommend it as worthy of most careful study and examination.

The condition entitled by Prof. Simpson, "Morbid Deficiency and Morbid Excess in the Involution of the Uterus after Delivery" is one to which attention has never been directed in this country, as far as we know, and we beg leave to call attention to the brief paper devoted to the subject.

Another exeedingly interesting paper is the one upon the "Detection and Treatment of Uterine Polypi." To obviate the well-known difficulty of getting at polypi attached high up in the body of the uterus, Prof. Simpson proposes to dilate the uterine cavity by means of sponge tents "made by dipping a piece of sponge in a strong solution of gum arabic, tying and compressing this sponge around a central wire, as its axis, into the required conical form by a continuous layer of cord, drying it thoroughly, removing the cord, and subsequently slightly coating the surface of the tent with tallow, or lard and wax, to facilitate its introduction." He mentions several instances in which he opened the cavity in this manner to such a degree as to enable him to reach a polypus attached to the fundus of the womb. He prefers excision to ligation, and certainly his experience tends to show that it is safer, more expeditious, and less apt to be followed by unpleasant consequences.

The paper on "Retroversion of the Unimpregnated Uterus" displays great ability, and is remarkable for the clearness and precision with which it is written; but the treatment which it recommends is not in accordance with our judgement. We doubt very much the practical utility of the pessary in this complaint. We are inclined to think that the introduction and retention of a foreign body in the cavity of the womb would be more likely to cause disease than to cure it; and that the disease thus acquired would be likely to complicate the retroversion to such a degree that the pessary would become the cause of positive injury to the organ.

In a long and elaborate paper entitled the "Sex of the Child as a Cause of the Difficulty and Danger in Human Parturition," Prof. Simpson abundantly proves by statistics that the births of male children are attended with more difficulties and dangers than those of females. But what of that? we are tempted to ask. Cui bono? As we cannot ascertain the sex of the child before it is born, how are we practitioners of midwifery benefitted by such knowledge, notwithstanding it seems to have been so laboriously sought.

The "Air-Tractor as a Substitute for the Forceps in tedious Labors" is the title of an ingenious and plausible paper. Indeed its perusal has led us to the belief that the Edingburg Professor must have a very considerable admixture of Yankee blood in his veins. The air-tractor, as its name signifies, is an apparatus which acts upon the atmospheric pressure principle and is intended for grasping the child's head in those cases in which, for want of room in the pelvis, the forceps can be used only with the risk of injuring the mother or child. In the hands of as skilful an accoucheur and ingenious mechanic as its inventor, it may possibly answer a good purpose, but we very much doubt whether it will be ever introduced into general practice. The machine, to be perfect, would necessarily be very complicated and cumbrous, and then the difficulty would be to apply it under all the obvious natural disadvantages of such cases. The idea itself is, we must confess, altogether novel and amusing. It is true it has been proposed in this country to construct an under-ground passage of a series of connected air-tight tubes for the purpose of transmitting packages and persons from one point to another by simply pumping out the air, and we have heard moreover of certain unfortunate persons who to use a popular phrase had been "sucked in," but really we never expected to hear of anybody being sucked out into the world.

The paper on "Turning as an Alternative for Craniotomy and the Long Forceps in Deformity of the Brim of the Pelvis" is one of the most elaborate and conclusive in the whole volume. Prof. Simpson states his views with great clearness, and they should have the more weight from the fact, that he is, we think, ordinarily too ready for the use of instruments. He sums up the advantages to both mother and child in a few propositions, of which we will give an abridgement.

1. It substitutes the delivery of the infant by the hand for the employment of instruments. This, no one will deny, is both more advantageous and humane, if equally effectual.

2. When the child is brought down footling, we have more power, than when the spherical arch of the cranium presents, of manually adapting and adjusting the shape of the head to the shape of the contracted brim.

3. In cases where the narrowness of the pelvis is so great as to produce a depression in the elastic and flexible cranium of the child, still this is not necessarily as fatal to the child, as craniotomy. On this account the operation of turning affords a fair chance of life to the child, while craniotomy affords none.

Lastly, the operation of turning is safer to the mother, in proof of which Prof. Simpson gives the following statistics.

Out of 303 craniotomy operations, 60 of the mothers died, or 1 in 5. Out of 192 cases of turning, 12 mothers died, or 1 in 16. Certainly this latter consideration ought to determine all obstetricians in favor of the operation of turning, and we have no doubt that it will be the one practiced by the scientific men of all countries, notwithstanding its greater difficulty. Doubtless those who are more ignorant, and who are attracted by the glitter of an operation, and the comparative easiness of craniotomy, will continue to practice the latter. Happily we Americans are seldom called upon to decide the question between the two, as deformed pelves are comparatively very rare in this country.

The paper on "Spontaneous Expulsion and Artificial Extraction of the Placenta before the Child," is very interesting and valuable. Professor Simpson has, however, been anticipated some years in the practice here inculcated. Braithwaite's Retrospect for 1855, established beyond a doubt that the late Kinder Wood, of Manchester, pursued this treatment and taught it in his lectures as early as 1822. Nevertheless, the profession is much indebted to Professor Simpson for his very valuable statistical tables and the deductions drawn from them. Everybody knows the risk attending placenta prævia, and not a few practitioners have met with cases in which the ordinary plans of treatment, such as the evacuation of the liquor amnii and delivery by turning, are inapplicable or very dangerous. It is conclusively demonstrated by the tables referred to, that complete detachment of the placenta is the surest method of arresting the hemorrhage. In connection with this subject, Professor Simpson alludes to the fact that "obstetricians seem to be unanimous in the opinion that all the more formidable hemorrhages occurring in the latter months of pregnancy, or in the earlier periods of labor, are the result of the separation of the vascular connection between the placenta and the uterus." He then goes on to say that "paradoxical as it may seem, there are sufficient grounds for believing that when the placenta is separated slightly and partially, the chance of fatal hemorrhage to the mother is greater than when the separation is entire and complete." In a case mentioned by Dr. Hamilton, in which fatal hemorrhage occurred between the seventh and eighth month, it was found on dissection that the area of the separated placenta was less than a square inch. Professor Simpson then proceeds to give the details of one hundred and forty-one cases, dividing them into four classes: First, cases in which the interval between the expulsion of the placenta and the birth of the child was considerable: second, cases in which the interval was less than ten minutes: third, where the child was born immediately after or along with the placenta: fourth, cases in which the period is not mentioned." These tables prove that the total separation and expulsion of the child is not so rare as some eminent authorities have asserted. They also demonstrate the fact that labor is generally premature in placenta prævia: eighty-nine out of the one hundred and forty-one being cases of this nature. They also establish the fact that preternatural presentations are very common under these circumstances. Of the ninety cases specified, in four the feet presented; in six, the breech; in twenty-one, the trunk or upper extremity; and in fifty-nine, the head. Out of the entire number, nearly one child in three survived. In regard to the hemorrhage, statements are given as to one hundred and eleven cases, in seventy-two of which it was great; in twenty-four, considerable; and in fifteen, slight or none. After the detachment of the placenta, the hemorrhage was totally arrested in a large majority of the cases, and was alarming in only five of the one hundred and eleven cases, or one in twenty-two. Only one of the five mothers died; all the others entirely recovered.

The comparative results as to the mother, between the two modes of practice, are very striking. By the common method of treatment, the average mortality is about one in three; but in this table of one hundred and forty-one cases of extraction and expulsion of the placenta, we find but ten deaths, or about one in fourteen; and in seven of these ten fatal cases, it is not certain that the detachment and hemorrhage produced this unfortunate result. We thus find, in a general summary, that the complete separation and expulsion of the placenta, in cases of hemorrhage, is not so rare as has been supposed; that it is not so dangerous a complication as has been imagined; and, finally, that the extraction of the placenta is the proper practice to be pursued when there is much hemorrhage.

In concluding this brief and desultory notice of Dr. Simpson's obstetrical works, we have a word or two to say in reference to the American editor's preface, and the too common practice, on the part of some physicians, of editing the medical writings of foreigners. In some few instances we doubt not the editor is actuated by a genuine desire to benefit the profession by introducing to their acquaintance men of worth who might otherwise live and die to us unknown; but we are sorry to be obliged to say that, in our judgment, the majority of the truly meritorious works that come to us in this form, are very far from having their value increased by the trite and unimportant annotations with which they are disfigured. The practice is an evil, and we should be glad to see it altogether reformed. Indeed it is high time we were becoming a little more Americanized, in respect to medical literature at least. It is really degrading when we reflect that while in literary pursuits of nearly every other sort, we have proved ourselves equal to the best and inferior to none, we should still have the appearance of hangers-on to the European profession for our medical reading. But what incentives to write and publish can an American physician have, when he knows that the medical book publishers, and a very influential class of his brethren, are virtually, if not professedly, leagued against him. Publishers find it far more profitable to seize upon a foreign book, and pay some doctor in this country for the loan of his name and titles, than to remunerate native authors as they deserve, and we cannot blame them for consulting their interests; but we can and should hold the editors responsible for their agency in the transaction.

We are led into these remarks by the unusual amount of toadyism displayed by the editor of the present volume, and the more than Boswellian care with which he has placed on record even the most trifling sayings of his 'master.' It will probably be news to some of our readers, who have only heard of Dr. Simpson as the discoverer of chloroform, to learn that he is better known throughout the United States, than any other living obstetrician; and that he has entirely revolutionized the practice of midwifery, "although not yet forty-four years of age." Such, however, is the statement of Horatio B. Storer, M. D., Boston, United States, one of the physicians to the Lying-in Hospital, Member of the Medico-Chiurgical and Obstetric Societies of Edinburg, etc., etc., etc. He tells us also that there are some points of Dr. Simpson's practice, about which some are in doubt, and others misinformed, and that he [Horatio B. Storer, M. D., etc., etc., etc.,] will interpret these dark sayings for us. Really we cannot but congratulate the profession of America, upon the appearance of this Moses who comes to direct and guide them in the true Simpsonian way.

The editor's attack upon Dr. Lee, of London, is entirely gratuitous, for his 'master' had expressed the desire "that bygones should be past, and the wrongs he had received forgotten." His imputations of unworthy motives to Dr. Lee, are really shameful, resting as they do upon the mere surmise of a partisan. In our humble judgment, nothing short of *deep personal wrong* can justify such an assault by an inexperienced and immature man, upon an old and most highly distinguished member of the profession, more especially as the 'master' of the former is so well able to take care of himself, and stands upon the same ground as the latter. We hope, however, that no one will imagine for one moment that we consider Dr. Lee in any way damaged by the young Bostonian;

and doubt not that, should he ever chance to see the American editor's preface to Professor Simpson's contributions, he would only be reminded of the swelling and puffing frog of the fable.

W. H. M.

ART. IV.—*Atlas of Cutaneous Diseases.* By J. MOORE NELIGAN, M. D., Lecturer on the practice of Medicine in the Dublin School of Medicine, &c., &c.; Blanchard & Lea, Philadelphia, 4to., 1856.

ONE of the handsomest of the many re-prints that the eminent publishing house of Blanchard & Lea have given to the Medical profession of this country is the set of illustrations of cutaneous diseases by Dr. Neligan. As specimens of the lithographic art we doubt whether superior can be found in any of the numerous works on skin diseases, that have from time to time been issued from the celebrated publishing houses of the old world. As the title indicates, the work is not a treatise on cutaneous diseases, but only a series of illustrations, ninety in number, drawn and colored from nature. Each plate, it is true, is accompanied by explanatory notes, but these are necessarily brief and only specify the generic and specific names of the several diseases, with the age, sex, condition, and occupation of the patient. As a work of reference to those who have already enjoyed the opportunity of studying the class of affections in question—as a book of remembrance, we doubt not that it will prove of eminent service.

ART. V.—*An Introduction to Practical Pharmacy: Designed as a Text Book for the Student, and as a Guide to the Physiaian and Pharmaceutist, with many Formulas and Prescriptions.* By EDWARD PARRISH, Principal of the School of Pharmacy at Philadelphia, &c.. &c. Blanchard & Lea, 8vo, p. 544, 1856.

IT is with reluctance and much regret that we are compelled to give the above work only a book-notice. It was our wish and intention to attempt an extended analysis of its contents that our readers might judge somewhat for themselves of its great and numerous merits, but the subject matter is of such a nature as to forbid anything like a review. All that we can say of it is, that to the practicing physician and especially the country physician who is generally his own apothecary, there is hardly any book that might not better be dispensed with. It is at the same time a dispensatory and a pharmacy and we take it for granted that no physician goes into practice so well versed in this branch of his profession as not to be obliged frequently to refer to some book or other for just such information as will be found contained in the volume before us. Having served an apprenticeship to the mortar and pestle, and having ever since taken a lively interest in everything pertaining to the pharmaceutic art, we feel at liberty to express ourselves freely about such matters, and we take the liberty of advising our country friends to provide themselves with the book under notice, assured that they will ever thank us for the advice.

ART. VI.—*Practical Treatise on the Diseases of Children and Infants at the Breast; Including the Hygiene and Physical Education of Young Children. Translated from the French of* M. BOUCHUT, *with notes and additions by* P. H. BIRD. 8vo., p. 776, New York, S. S. & W. Wood.

WE take this opportunity of simply announcing the above work with the intention of giving our readers at no distant day an extended analysis of its contents. It is sufficient now to say that it comes to us accompanied by the high eulogiums of the French press, endorsed by a successful translation in London, and favorably received by the profession of our own country.

ART. VII.—*Digestion and its Derangements; The Principles of Medicines applied to Disorders of the Alimentary Canal;* By THOMAS K. CHAMBERS, M. D., Lecturer on the Practice of Medicine at St. Mary's Medical School, London, &c., &c. 8vo. p. 440, New York, S. S. & W. Wood.

WE took occasion in the last No. of this Journal to bring to the notice of our readers a book on the Derangements of Digestion by Dr. Budd of London, but this is no reason why we should not enter into a review of another work upon the same subject, and if we retain our present ideas concerning the prevailing ignorance upon the subjects in question, and their great importance both to the practitioner of medicine and the people generally, we shall make no excuse for calling attention to every work of the kind, great and small, that may from time to time be given to the profession. We have not yet had time to examine the volume before us, but we hope to be able to do so before very long, and we shall be very sure to give our readers the benefit of our reading. In the mean time, judging from the high standing of the author, we venture to state that no one who purchases the work will have cause to regret it. In point of paper and typography it is not excelled by any medical book that the deservedly eminent Woods have ever issued from their press.

ART. VIII.—*On some Diseases of Womem admitting of Surgical Treatment.* By ISAAC BAKER BROWN, F. R. C. S., Surgeon Accoucheur to St. Mary's Hospital, London, &c,. &c. 8vo. pp. 275; Philadelphia, Blanchard & Lea, 1856.

THE appearance of a work on the surgical diseases of women by Mr. Brown, will be hailed with applause by all who are acquainted with the peculiar fitness of the author for the task. We take it for granted that there is no one in the active practice of his profession who does not often feel the want of just such a work as the one under notice, and we cannot promise ourselves a more pleasant and profitable labor than an analysis of its contents. This, however, we shall have to defer until the next issue of the Review.

ART. IX.—*An Analytical Compendium of the various Branches of Medical Science, for the use of Students.* By JOHN NEILL, M. D., Surgeon to the Pennsylvania Hospital, &c., and FRANCIS G. SMITH, Physician to St. Joseph's Hospital, &c. 8vo. p. 975, Philadelphia, Blanchard & Lea, 1856.

WE need only to state that the above work has passed to a new and enlarged edition. The deservedly high reputation of its authors and the favor with which the first edition was received are sufficient guarantees of its peculiar exceilencies.

PART SECOND.

Original Communications.

ART. I.—*An Essay on Croup.* By S. M. BEMISS, M. D.

CROUP is a disease of such general prevalence and fatality, that but little apology is necessary for frequently calling the attention of Medical men to its consideration. It should perhaps rather be held among members of the profession a matter of duty to bring forward, each the result of his observation, so that, by united contributions, we may establish correct principles of pathology, and such appropriate treatment of the disease, as to diminish, at least to some extent, the humiliating ratio of mortality heretofore marking its progress. The chief obstacle to the investigation of this subject, has been difference in diagnosis, or more properly perhaps, difference in the use of the term croup. Some writers apply the designation in its original sense to a symptom merely, and include in their descriptions various pathological conditions attended by stridulous respiration; others regard the presence of false membrane in the larynx or trachea necessary to its definition. This difference has led to a great deal of confusion and apparent discrepancy among authors, and renders it necessary to examine medical observations closely, to ascertain whether they relate to true or false croup. For the remedy of this evil, some authors have advised an abandonment of the word croup, and numerous scientific terms have been proposed as substitutes. But, as stated by Roger Collard, none of them convey to the mind but a part of the phenommena of the disease; and as the term is in general use I shall adhere to it, premising that whenever I employ the word without other specification, I have reference only to true pseudo-membranous croup. In the course of the article I shall take occasion to notice those affections which, from resemblance of symptoms or supposed analogy of character, have been associated with membranous croup, and shall then discuss the propriety of classing them under the same denomination.

The mortuary lists of various countries exhibit a striking uniformity in the rate of mortality from croup. This observation will even apply to countries subject to climatic influences as different as England and Kentucky. In the former country, the deaths for five successive years amounted annually to about one in every 3500 of the whole population; In Kentucky, for three successive years the annual report of deaths under this head, was about one in 3000 of the white population, and one in something less than 2000 of the negro race. Massachusetts and New Jersey exhibit a ratio of over 1 in 4000, and Connecticut less than one in the same number of their respective populations for the year 1854. If we take into account large urban populations alone, this relative ratio is almost always greatly increased: Boston, New York, amd Philadelphia lose annually about one in 1000 of their population from this cause. These estimates are in many instances only approximative, but they are believed to fall below rather than to exceed the truth. The increase of population since 1850 impairs to some extent the correctness of statistics based upon the census of that year.

SYMPTOMS.—The symptoms of croup are divided into those of invasion; those of development or confirmation; and those of collapse or suffocation. The symptoms of the first stage are in a majority of instances those of ordinary catarrh. The child complains of light chills; of malaise, probably of its head, or throat; there is more or less fever, the cheeks are flushed, the eyes watery, the discharge from the nares, sometimes unusually transparent and ropy, is increased. The voice and cough are often somewhat hoarse, but as the child frequently pursues its usual pastimes without any symptoms of such gravity as to demand immediate interference, it seldom occurs that the apprehensions of its friends are excited, and the physician is rarely summoned during this stage. These precursory symptoms may continue for a longer or shorter period, varying from ten or twelve days to a few hours. They may even be wanting, according to some observers, though Ryland says the precursory catarrh exists 'probably in all cases, but often passes unnoticed on account of the extreme youth of the subjects of this disease, and the undistinguishing character of the symptoms themselves.'

The symptoms of the second stage date from the accession of the characteristic cough and respiration. The lesions to which these peculiar modifications are due, undoubtedly have their origin during the first stage, and may precede the actual symptoms of development for a longer or shorter period, in measure with the rapidity of march of the disease. These lesions are probably at first more or less extensive catarrhal irritation or hyperemia of the mucous membrane, merging itself into inflammation (Hasse,) and pouring out the material of the false membrane. As this concrete exudation, and its attendant serous infiltration encroach upon the larynx, they impede its functions, and produce alterations of respiration, cough, and voice pathognomonic of the disease. The earliest change in the respiration is, according to Dr. Ware, a mere exaltation of the act, denoted by a little more than usual exertion of the voluntary respiratory muscles, a 'slight dilatation of the nostrils, and a little whiz or buzz accompanying the passage of air through the rima glottidis.' As the larynx, and especially the glottidean chink are invaded, the respiration becomes laborious, stridulous, and sibilant. Drs. Vauthier and Blache have compared the sounds of the respiration to the movement of a saw through soft stone, and there is justice in the comparison. The respiratory act is always hurried; in Vauthier's cases it averaged from 36 to 40 per minute; the greatest number was 56. 'A symptom of the greatest practical value in regard to the respiration in croup is the sudden and paroxysmal exacerbations of the dyspnœa which constantly exist. For instance, we witness a certain degree of obstruction to the respiration, which appears to be mechanical, and is continuous; the violent aggravations of dyspnœa, not persistent in their character, and evidently attributable to spasm. These paroxysms have a tendency to periodicity, and recur more often at night with obvious remissions towards morning. They may however be induced by any excitement or provocation, by deglutition, coughing, or attempts of the physician to make a close examination.'*

It is impossible to describe the characteristic cough of croup so as to convey a correct idea of its sound to the inexperienced, while to the experienced, description is unnecessary, for it is so peculiar, and often connected with such painful associations, that those who have heard it seldom fail to recognize it again. It very often first announces itself at night, and is, at the incursion, usually loud, metallic and harsh; but as the exudation progresses along the larynx, and the vocal chords becomeveiled, it loses the clangous resonance and sounds as though it were stuffed and pent up in the trachea (Guersent). During the dyspnœal fits it undergoes a corresponding aggravation, becoming tighter and more embarrassed.

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* Vauthier. Archives Gen. de Med. Mar. 1848.

The voice at the debut of croup is generally cracked and hoarse, and as the vocal chords become involved, it is whispering, feeble, and often completely lost. Aphonation is almost always reluctantly performed, and the child often endeavors to express its wants by signs rather than attempt to speak, the repugnance being doubtless oftentimes due to the pain attending the effort. Louis' adult patients complained of a tearing sensation produced in the throat by efforts to speak.*

The confirmed stage of croup is accompanied by more or less strongly pronounced febrile symptoms; the pulse is generally frequent and hard, the tongue red at the tip, loaded and white at the base; the tonsils are frequently swollen, and very often the seat of the fibrinous deposit. The external throat and face may present a puffed appearance; sub-maxillary glands are quite often enlarged, and the line of the larynx and trachea tender to pressure. Deglutition is generally performed without other difficulty than temporary interference with respiration. The skin is sometimes hot and dry, but, in many instances, it is soft and of normal temperature; during the accessions of dyspnœa it is frequently bathed in perspiration. The bowels are ordinarily rather inactive; the digestive functions and appetite have, in a majority of my observations, been uninterrupted except by the influence of nauseants.

The third or collapsed stage is marked by indications of failing vitality, such as more or less lividity of the lips and face, flagging or intermittent pulse, constant somnolency, and coldness of the extremities and surface. The voice in this stage is either a faint whisper or entirely lost. The respiration retains its characteristics, but there is more continuous difficulty in its performance; it has often a more strongly marked wheezing sound as of 'air forced by a piston through a dry valve;' and the soft parts of the thorax sink deeply at each inspiration. The cough, dry, feeble, and ineffectual, becomes in most cases less frequent, and occasionally entirely ceases. These symptoms go on increasing in severity until the patient perishes either comatose, or in a violent dyspnœal paroxysm.

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*Du croup considere chez l'adulte.

The appearance of a child after the full establishment of croup is generally that of inexpressible distress. The dread of impending suffocation is plainly depicted in his countenance, and as the mental faculties are retained to the last, his intelligent watchfulness of the ministrations around his bed, and the gloomy calmness of despair written on his features, form pictures too touching to be readily erased from the memory of the observer. The decubitus is usually dorsal, with the head carried back. The hand is frequently brought to the front of the neck and is sometimes passed into the throat in vain efforts to remove the mechanical obstruction to respiration.

The appearance of the false membrane upon the fauces is a most important symptom in croup. It may often be observed at any period of the disease, but should be regarded as a symptom proper to the first stage, since its manifestation is nearly always anterior to the full confirmation of the malady. It is seen in distinct whitish patches, or a continuous sward upon the tonsils, uvula, base of tongue, or any part of the posterior throat susceptible of being brought into view. Dr. Ware found it present in 32 of 33 cases under his observation. Guersent considered it commonly present in the first stage, but often removed by natural processes or local applications, so as not to be visible later in the disease. These facts cannot be too strongly urged upon the attention of physicians, for they teach the importance of carefully inspecting the throat in every case of suspected croup or catarrh brought under their notice.

The expectoration in croup varies greatly in quantity; sometimes there is little or none, sometimes an abundant viscid ropy mucus collects in the fauces, and increases the difficulty of respiration, until it is removed either by swallowing or the act of vomiting. Fragments of false membrane more or less large and irregular in form are occasionally ejected. Towards the latter stage, the expectoration is often muco-puriform in appearance.

COMPLICATIONS.—The most frequent complications of croup are pneumonia, bronchitis and the exanthematous disease. Barthez and

Rilliet found pneumonia in five-sixths of their cases. Wert also regards it as a common complication, and states that it was double in all the cases in which he noticed its presence.

According to Copeland, 'the extension of the inflammation to the bronchia and lungs, is indicated by unremitting persistence of symptoms, deep suffocative cough, lividity and leaden hue of the countenance, cold clammy perspiration and somnolency.' Recent pathological investigations also indicate that fibrinous concretions of the heart are not uncommon complications.*

The value of auscultation in croup is very much diminished by the fact that its signs are masked by the sounds of respiration, and that attempts at this method of examination agitate the patient and increase the stridor of his breathing. M. Barth was of opinion that a vibratory sound (comme si un voile mobile était agité par l'air) indicated the existence and limits of the false membrane; but it is probable that this sound is connected only with those occasional instances in which a partially detached membranous fragment moves to and fro with the respiratory currents. It is likely that its benefits are limited to the information it conveys of the 'amount of obstruction to the entrance of air into the lungs, and the extent of disease of the air tubes or substance of the lungs, which accompanies it.' (West.)

PATHOLOGICAL ANATOMY.—The anatomical lesions peculiar to croup relate to the appearance and extent of the exudation, and the condition of the subjacent parts.

The false membrane is of a grayish white color, and varies in consistence from that of thick cream to tough leather, (Rokitansky.) It is sometimes disposed in irregular plates, the intervening mucus surface presenting a normal appearance: again it is found covering the whole wall of the larynx and trachea with an unbroken pavement, reaching even to the small bronchial tubes. Dr. Vauthier obtained from one of his patients so perfect a duplicature of the trachea that it was susceptible of insufflation. Its thickness varies from that of ordinary writing paper to one and a half lines. It is nearly always thickest along the posterior wall of the larynx and trachea. Its most frequent location is the larynx, reaching to the upper part of the trachea. In 54 autopsies M. Bretonneau found the false membrane terminating in different points of the trachea in 31; penetrating the large bronchia in 16; reaching the terminal bronchia in 7, (Guersent). Dr. Budd conceives that the deposit has a peculiar and unexplained predilection for the right bronchus. The surface of ulcers, of wounds made in the performance of tracheotomy, or any part deprived of the cuticle may occasionally become the seat of exudation. The false membrane has chemical reactions identical with the fibrine of the blood. It has never been observed to be organized, but small points of incipient fibrillation have been found to exist. It is characterized by an early tendency to break down and liquify (Rokitansky), and during this process it sometimes becomes corrosive, and ulcerates the subjacent tissues.

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* London Lancet, vol. 1, 1854.

With regard to the state of the structures beneath, West says, 'On removing the false membrane from the trachea, the lining of the tube is seldom found to present any change other than an increase of its vascularity, which, though sometimes very considerable, does not bear any certain relation to the amount of false membrane present.' Rokitansky says the submucous tissues, especially the areolar, appear to be infiltrated. It is worthy of remark that in a majority of dissections of patients dying from croup, the mechanical occlusion of the glottis by either the membrane or its subjacent swelling is not so complete as to account for death.

CAUSES.—Before adverting to those causes which seem to excite attacks of croup, and are immediate in their influence, it will be proper to consider the circumstances of age, sex, and constitution most favorable to its development.

Croup is essentially a disease of childhood; and although no period of life is altogether exempt, it probably finds most victims between the ages of two and four years. Of 37 cases reported by Vauthier, 24 were between those ages. Of 13 cases of which neighboring physicians have furnished me notes, 9 were between these periods, 2 over five, and 1 under two. Of 10 cases under my own observation, 7 were between two and four, 2 under two, and 1 over five. Of 1401 deaths from this disease in Kentucky during the years 1852, '53 and '54, 1241 were under the age of five.

Most observers agree that males are more liable to croup than females. Of 1389 cases in Kentucky, 764 were males and 625 females.* It is probable that this seeming law of the disease is set aside by epidemic influence. In the epidemic recorded by Dr. Vauthier, the deaths were 21 females to 14 males. In an epidemic of 6 cases witnessed by Dr. Wible, 4 were females. Of 7 cases attended by Dr. Meigs while croup was epidemic in Philadelphia, 5 were females. The facts, however, with regard to the relative liability of the sexes, in either sporadic or epidemic croup are not sufficiently numerous to justify any absolute conclusions.

It will require further observations to decide positively the state of constitution most favorable to attacks of croup. Jurine, a very accurate observer, thinks the lymphatic temperament most amenable to its incursions. I am clearly of his opinion, though it is not to be denied that the weight of medical authority is against this view. Of the 10 cases under my notice, 6 were undoubtedly of a constitution in which this temperament preponderated. It is an incontestable fact that strong family predispositions exist towards croup. Of the ten cases just referred to, two occurred in one family and two in another, and in one of these families there had been previously two deaths from the same disease. It is well to remark also that no two deaths occurred in the same family within a period of a year, except in one instance; so that no epidemic influence, or simultaneous subjection to exciting causes can be alleged, to contravene the supposition of family diathesis.

One of the most remarkable predisposing causes of croup is early weaning. So many close observers agree upon this point, that we may receive it as an established fact. Of the 10 cases under my observation 5 were children of females, who, from frequent gestation, were obliged to wean their children early. Other conditions, such as enlargement of the tonsils, and the influence of exanthematous or other disease, also predispose to the disease.

The immediate causes of croup, are generally referred to atmospherical conditions. Cold, especially humid cold, is probably the most common exciting cause. The influence of temperature is shown by its greater frequency during the cold months of the year. Of 184 cases occurring in the city of Boston in 1853, 132 were in the first three and last three months of the year. The months showing respectively the highest and lowest number of deaths for three years in Kentucky, were October and May.

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* Registration Reports of Kentucky for 1852, '53, and '54.

The Registration Report of Kentucky for 1854 shows a large increase of the deaths from croup over that of the previous year. The last eight months of 1854 were remarkable for extreme, almost unbroken dryness of the atmosphere, and it is a singular fact, that nearly the entire increase of deaths for the year occurred during its terminal half. This will be more clearly shown by the following table:

	DEATHS.		DEATHS
First six months of 1853,	207	Last six months of 1853,	173
" " " " 1854,	218	" " " " 1854,	321
Excess - - - - -	9	Excess, - - - - -	148

I shall not attempt any explanation of this seeming contradiction to previous observation, but simply suggest that the continual irritation of the respiratory mucous membrane by particles of floating detritus might tend to induce the catarrhal irritation and hyperemia preliminary to croup. When treating of the pathological condition of the system in croup, I shall refer again to this point.

DIAGNOSIS.—The diseases most frequently confounded with croup are catarrh, laryngitis, laryngismus, and diptheritis. I propose to notice these only so far as to point out the resemblance and relations they bear to membranous croup.

1st. *Catarrh.*—The catarrhal or mucous croup of some authors, does not in my opinion deserve to be considered a variety of croup. Congestion about the glottidean chink, and viscid mucus adhering to the walls of the larynx, may give rise to hoarseness and stridulous cough, bearing sufficient analogy to croup to awaken some anxiety; but the diagnosis is not difficult; the symptoms lack the gravity and intensity of those of croup; and with the subsidence of the slight febrile action attending the affection, renewed secretion occurs and relieves the congested membrane. The bronchitic, rather than the croupal nature of the disease determines the diagnosis.

2d. *Laryngitis.*—Laryngitis or inflammatory croup is, in the child, very often mistaken for membranous croup. The diagnosis is generally very difficult, but, in a practical point of view, important. I shall have occasion under a subsequent head to express my views of the difference in the nature of the two affections, and shall here consider only the question of diagnosis. Barthez and Rilliet[*] remark that 'the diagnosis in certain cases is so difficult that practitioners the most experienced have been and will still often be led into error.' The following is a comparative synopsis of symptoms from these authors:

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[*] **Maladies des Enfants.**

Pseudo-Membranous Croup.	Laryngitis.
Pseudo-membranous angina often precedes the invasion.	No preceding diptheritic angina.
The symptoms of invasion exhibit generally less gravity, the fever is less intense, excitement less marked.	The disease announces itself like the severe phlegmasiæ by very intense fever and great agitation.
The raucity of the cough and hoarseness increase progressively.	The cough is very raucous from the onset, the severe hoarseness results in aphony.
The dyspnœa exhibits itself in violent paroxysms which often leave between them a manifest remission.	The dyspnœa exists from the beginning and augments progressively; very rarely attended by suffocative fits.
The febrile movement is rarely of a high degree of intensity.	The fever is violent during the whole course of the disease.
The intellectual functions remain unaffected.	Delirium and convulsions sometimes occur.

Laryngitis is attended with more pain, heat, and tenderness in front of the throat. The expectoration is of frothy ropy mucus. The only positive points of diagnosis, however, are the appearance of the false membrane upon the fauces, or its expectoration in the one disease and its absence in the other. We have not sufficient statistics to justify any conclusion with regard to the frequency of laryngitis in early life. Under Dr. Ware's observation its relative frequency to croup was as 18 to 22. The average duration of laryngitis in the child is much less than that of croup. Its career, more synochal in type, terminates, if fatal, equally as soon, and if favorable, much sooner than that of croup.

3d. *Laryngismus.*—Laryngismus, or the spasmodic croup of some authors, is more often confounded with membranous croup than any other disease. A large majority of those sudden attacks reported by some writers as violent cases of croup resulting in speedy cure, are doubtless only instances of laryngismus. It is, in its purity, a disorder of the diastaltic spinal system; or, according to Marshall Hall, it is rather a symptom than a disease, and may attach itself to many conditions, and appear in various grades of severity. It is a frequent attendant upon the process of dentition and is referrable then to irritation of the trifacial nerve. Irritation of the pneumogastric nerve from over-feeding or indigestion may also occasion it. Dr. Ley relates cases in which it seemed to be occasioned by pressure on the pneumogastric from enlarged bronchial glands. Dr. T. G. Richardson of this city has met with a similar instance. In these latter forms it is, according to Dr. Hall, 'paralytic,' persistent in its recurrences, and fatal. Under almost all other circumstances it ceases simultaneoulsy with the removal of the exciting cause. It is more apt to appear in children of nervous temperament. The attack is liable to come on at night, sometimes recurring only at night, and manifesting occasionally a remarkable tendency to periodicity in its returns. I have notes of a case, recently witnessed, in which the paroxysms recurred within a short period of 7 o'clock, for three successive evenings. The advent of laryngismus is sudden, seldom preceded by catarrh, or any prodrome calculated to attract attention to the respiratory organs. The cough is more hoarse, raucous and sonorous than that of croup. The voice is hoarse and cracked, but never lost. The respiration is frequently very hurried and laborious; it reached 60 in a minute in a case under my observation. In laryngismus the inspirationis difficult, and expiration comparatively easy; in croup both acts are obstructed. The cyanosis, intermittent pulse, and reverted head are often as strongly marked as in the last stage of membranous croup. During the remissions of membranous croup, the cough and respiration, though moderated in their intensity, retain their pathognomonic character; while in the intervals of the paroxysms of laryngismus the patient is often almost entirely exempt from indications of disease. There is seldom persistent fever in laryngismus, though it sometimes occurs that an inflammatory element, general or local, is combined with the affection, and gives it a febrile type. Family idiosyncrasy will often assist in determining a diagnosis; if the patient or other members of the family have had laryngismus or infantile convulsions, the presumption will be strong that the present is a convulsive affection. There is no appearance of false membrane upon the fauces in laryngismus, nor expectoration which would justify a belief that such exudation had existed in any part of the tracheal course. Dr. Churchill is of the opinion that the disease may, by neglect, be converted into membranous croup, but the records of medical science are so barren of such instances that we may consider their rare occurrence as simply an accidental blending of the two affections. This malady should in our opinion, be regarded as a complication, but not a variety of croup.

4th. *Diptheritis or Secondary Croup.*—This affection possesses so many symptoms in common with idiopathic croup, and so few of striking contrast, that I am confirmed in the opinion that they are true congeners, and should be classed as such. Dr. David Welsh, in an account of diptheritis which appeared in the Ohio Med. and Surg. Journal, May, 1850, gives the following symptoms of invasion: 'The constitutional symptoms were generally vague and deceptive at the outset, there being but little to attract the attention of the careless observer—generally nothing more than apparent lassitude with a dulness of expression and slight tendency to somnolency, and generally moderate febrile excitement and derangement of the secretions; the patient's complaining little or none.' The first local manifestation, as in idiopathic croup, is upon the fauces. There first appeared blotches upon the mucous membrane and 'very soon there could be seen concretions forming upon the inflamed surfaces, first in small circumscribed patches of irregular shape, not very dissimilar to patches of curdled milk, of varying shades of color, sometimes whitish yellow or ash color, at other times of a dirty bluish tint. As the inflammation went on, these inspissated concretions spread and coalesced, presenting the appearance of false membranes, sometimes covering the entire pharynx and velum palati.'

Although the point of local development in these two affections is the same, their mode of progression differs somewhat. That of croup, as we have seen, is nearly always from above downwards, while that of diptheritis is very often in different directions. The exudation of diptheritis differs from that ef croup in its greater tendency to occur at first in insulated patches, and by its greater aptitude to exhibit itself upon blistered, abraded, or ulcerated surfaces. The esophagus, stomach and vagina are occasionally seats of its development. The exudation is also softer, and undergoes decomposition earlier than that of croup. Diptheritis is a more ataxic conditon of disease than croup, and is often attended with fetid breath, diarrhœa, and well marked typhoid indications. The fetor of the breath, and probably the diarrhœa, are due to the putrefaction of the deposit, (Empis). More or less swelling of the submaxillary glands is said to be always present. Diptheritis is epidemic in its tendencies, and sometimes impresses large districts with its influence. It has occasionally appeared to be contagious. but this point is not positively established. The history of the case and prevalent diathesis may serve to establish the diagnosis previous to the invasion of the larynx; after that event, the disease may, for all practical purposes, be regarded as one of true croup, subject to the same laws of prognosis and treatment.

Nature.—The nature of croup is a subject so difficult of explanation, that farther investigations seem to be yet required to settle beyond question some points of its pathology. The idea has long been held by most of the profession, that it is purely a local inflammation, differing only in degree from simple acute laryngitis. Others again have taken the ground that the expression of inflammatory symptoms, either local or general, has not so much agency in determining the presence or absence of false membranes, as its accidental dislodgement from the throat by expectoration. I am not prepared to deny that this latter circumstance may not occasionally prevent the concretion of the exudation, but that it has any just claim to be considered as the sole cause, or even a common cause, of the difference between croup and laryngitis, is, I think, a matter of inference only, and not of proof. I do not think the phenomena of croup will support either of the above conclusions. On the contrary, many of them clearly point to an essential difference in the character of these affections—a difference which does not regard the intensity or extent of the inflammation so much as the state of the system at the time of its incursion. Without attempting to discuss this question as fully as its importance demands, I shall trust the safety of my conclusion to one or two points of contrast between croup and laryngitis, and to the opinions of the distinguished pathologists upon whose researches it is based. If, with a view to comparison, laryngitis be taken as the type of a local inflammation in a normal state of constitution, the deviations of croup from the standard are shown by the following facts: 1st.

That traumatic inflammations of the larynx do not result in croup. Barthez and Rilliet quote an exception, it is true, where the child of a druggist died of croup from inhaling the vapor of muriatic acid; but as far as my researches have been made, this is the only case of the kind on record, and I am disposed to regard it as a mere coincidence of cause and predisposition. Scalds of the glottis sometimes give rise to an exudation, but it is confined to the points of primary lesion, and does not, like that of croup, extend continuously over large surfaces of membrane. 2d. Although fibrinous exudation relieves local inflammation, as Rokitansky and others have shown, yet the tendency of croup membrane is to reproduce itself when forcibly removed from a surface; this would not be likely to occur if the disease were purely local. 3d. In croup, exudations upon ulcerated or abraded surfaces are not very uncommon; in laryngitis, they never occur.

These differences in character appear to me to be explicable only by the supposition of a constitutional diathesis in croup, and are, I think, best accounted for by the teachings of the Vienna school of pathology, to which, however, my limits will allow only a brief allusion. Rokitansky contends that croup is but the local manifestation of a constitutional disorder, and supposes this derangement of the constitution to be a deviation from the normal state of the fibrine of the blood. He denominates this condition the 'fibrine crasis,' and supposes the change may be either qualitative or quantitative. Dr. Mauthner of Vienna says: 'that increase of, and qualitative changes in the fibrine of the blood are found to be favorable conditions for the occurrence of croupose products is not to be denied, since it is a clinical fact, that, in many cases, such a state of this fluid precedes the local affection. But our knowledge concerning the blood crasis, being yet very imperfect, it may occur to the most experienced that croupose exudations shall be formed, of whose existence he is ignorant, or only knows when too late.' The causes and nature of this pre-existent crasis in croup look to future observations for their establishment. Dr. Theophilus Thompson* seems to regard super-fibrination of the blood as a cause of fibrinous exudation, and supposes excessive use of animal food likely to produce this state of hyperinosis. If this supposition be correct, it may in part account for the frequency of croup among children who are taken early from the breast, and fed upon diet of this description. It may also account, in part, for the increased prevalence of croup in Kentucky during the latter part of 1854, when from the extreme dry weather, the supply of vegetables was deficient, and a greater resort to animal food necessarily induced. The same causes excited to produce an epidemic of croup under the observation of Dr. Vauthier in Paris during the years 1846–7.* However little we are able to say positively upon this subject, we know that the state of respiration in croup is not favorable to the increase of fibrine, and if its excess in the blood be found to exist in that disease, the inference is very strong that the increase occurred at least prior to the obstructed respiration.

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* London Lancet, 2d vol., 1850.

It may be stated then that while catarrhal hyperemia of the throat and larynx may be equally the exciting cause of croup and larynitis, the pre-existent crasis is the cause that determines the nature of the disease. I would account for its great prevalence among children by reference to the following circumstances: 1st. The maladaptation of diet to the systemic wants of children induces more frequent derangement of the constituents in their circulating fluids. 2d. The greater frequency of catarrhal irritations, as exciting causes. 3d. The greater tenuity of the mucous membrane and the walls of its terminal vessels in children, is more favorable to the exudative process. The converse of this, combined with a greater laxity of the sub-mucous areolar tissue in the adult is more favorable to infiltration beneath (œdema glottidis) than to exudation upon the membrane. 4. In the adult, the greater calibre of the larynx, and ability to expectorate, favor the expulsion of the exudation prior to its concretion.

With regard to the formation of the false membrane, Rokitansky says, 'from analogy, it is probable that at the commencement of the process a serous fluid is effused, by which the epithelium of the diseased mucous membrane is destroyed, and that the exudation of the plastic matter takes place afterwards.' When the system is in a sthenic condition and the local inflammation not intense, the exudation assimilates, in its power of organization, more to the blood plasma, and its concretion is more perfect.[*] The converse is equally true, for we observe in diptheritis, where the local inflammation leads to ulceration, as it does not unfrequently, and the state of the system is asthenic, the exudation has a more feeble power of organization, is soft, of a semi-purulent character, and undergoes rapid decomposition. The strong disposition this exudation manifests to pass from the pharyngeal to the laryngeal surface has not been explained. Empis supposed that exposure to air was more favorable to the exudative process, which, if correct, may serve to account for this preference.[†] These observations are, I think, important to a knowledge of the nature of croup.

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*Archives Gen. de Med., Mar. 1848.

Laryngismus is also an important element in the nature of croup, with which it is always more or less combined, and upon the character of which it stamps, more or less completely its own impress. The periodic exascerbations of croup, and the aggravation of its symptoms under emotional excitement are undoubtedly due to this spasmodic complication. The best explanation that can be offered of the tendency of croup to nocturnal announcement and aggravation, is that given by Marshall Hall, and quoted by Dr. Newman. 'Volition has a constant influence over some of the muscular actions, of which we are almost unconscious, and which we only discover by carefully observing the effects of its subtraction. The acts of respiration originating, as they do, in the reflex function of the spinal cord, are nevertheless regulated and rendered equable by the silent but constant influence and agency of volition.'[‡] Thus during the withdrawal of volition in sleep, the laryngeal muscles are more amenable to spasmodic influence, and by their irregular contraction produce the dyspnœal fits. During the latter stages of croup convulsions occasionally occur, ascribable no doubt in many instances to a poisoned state of the blood from retained carbon.

PROGNOSIS.—The prognosis of croup is, in the large majority of cases, unfavorable. The presence and nature of complications, the relaxation or increased severity of the symptoms detailed, determine its character. Patients of croup may die from suffocation by mechanical closure of the air tubes, produced by the thickness of the false membrane and swelling of the tissues beneath; from suffocation by spasmodic closure of the glottis; from exhaustion by defibrinization of the blood (Rokitansky); from fibrinous concretions of the heart (B. W. Richardson); from prolonged incomplete asphyxia, and its poisoning influence upon the blood; and from the attendant conplications.

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[*] West on Diseases of Children, and Carpenter's Human Physiology.

[†] Archives Gen. de Med. Feb. 1850.

[‡] Am. Jour. Med. Sciences, Jan. 1856.

TREATMENT.—In looking over the pages of different authors upon the treatment of croup, the reader is struck with the great number of remedies proposed for its relief. But, as has been well remarked by Vauthier, 'in therapeutics numerous remedies more often indicate poverty than riches,' and the necrological reports fully demonstrate that fertility of resources in reference to this disease, has sadly failed to deprive it of its fatality. It is even a matter for solemn and responsible inquiry, whether remedial agents may not in some instances have served to lengthen the mortuary lists. With my present views of the pathology of croup, I think the physician should enter upon its treatment with a constant reference to the laws connected with the formation and disposal of its exudation. As a disease of the mucous membrane, apart from the exudation, 'it is often a trivial one,' but it is this concrete deposit which gives the malady its fatal character; consequently the limitation, and removal of this formation are of vital consequence to the successful issue of every case. Before undertaking any remedial procedures, especially such as may compromise the strength of his patient, the physician should keep in view the tendencies of this concretion when left to nature. Dr. Bennett says, 'when the exudation has coagulated it constitutes a foreign body which can only be removed by its becoming organized or by its dying.' We have seen that organization of this membrane never occurs; 'dying' and purulent decomposition *always* occur, if the life of the patient is preserved sufficiently long for these processes to be effected. Hence the practitioner may find cases where the safety of his patient is better insured by trusting to this slow but certain natural process for his relief. (Ware.) It is important also to recollect that the exudative process is not necessarily a condition of active inflammation, local or general; we should therefore carefully avoid exhausting our patients by combatting an element which may not exist. With these views I regard the following to be the indications of cure:

1. To limit the exudation and promote its expulsion.

2. To treat complications when present.
3. To sustain the strength of the patient.
4. To form an artificial opening for the air when the occlusion of its natural passages renders it expedient.

To avoid repetition I shall consider the several remedies in connexion with the indication which their leading properties seem best to fulfill, and then pursue them through any other indications to which they may apply.

1. *To limit the exudation, and promote its expulsion.*—BLOODLETTING.—No remedy of equal power has been so lavishly and indiscriminately resorted to, in croup, as bloodletting. It has been practiced from the first announcement of the disease to the deep coma of collapse, as I have witnessed, with an equally unsparing hand; and often, as I conceive, with fatal effect. I believe, however, that bloodletting may sometimes prove advantageous, if resorted to at the very onset of the disease, and in a sthenic condition of the system. I would admit it, then, not for the purpose of reducing inflammatory symptoms, so much as to detract from the mass of the circulation, and by derivation reverse the action of the vessels pouring forth the deposit. But if full dilatation of these vessels has occurred, and the membrane is established over a considerable surface, bleeding should not be practiced. It is even problematical whether it has the good effects imputed to it above. Copeland mentions having seen the disease attack young children "soon after having lost much blood in the treatment of other diseases." Valliex quotes a case from Bretonneau, in which a "very abundant local bleeding was followed by a prompt extension of the disease." I should prefer venesection to local bleeding, as being more under control and probably less liable to agitate the patient; but with my present feelings of distrust in its beneficial effects, I should assume the responsibility with the utmost reluctance, and only after the most careful investigation of symptoms. In croup, complicated with pneumonia, it is clearly contra-indicated.

EMETICS.—I regard emetics as among our most potent means in answering the present indications. In the early stages they should be given with a view to effect revulsion in the circulation, and to solicit emulgence of the salivary and muciparous glands, and thus relieve the local congestion. The specific emetics are therefore to be preferred, and of these I think the end best attained by ipecac, to which, if a full effect be desired, a small portion of tartrate of antimony may be added. Later in the disease, when the only use of remedies of this class is to free the fauces of tenacious mucus, and to encourage the expulsion of the membrane by the concussion of the act of vomiting, the indications are best answered by the irritant emetics, such as the sulphates of zinc, alumina and copper, whose effects are prompt, and terminate with the act of emesis. These remedies, especially the sulphate of alumina and potash, have at times enjoyed the reputation of specifics for croup. In addition to their emetic properties, their astringent and alterant effects upon the throat no doubt contribute somewhat to their curative influence. It is best, whichever of these remedies be employed, that it should be always administered in doses sufficiently large to insure prompt emesis. The superiority of emetic over nauseating doses of medicine in the treatment of this disease, is clearly proven by the valuable observations of M. Valleix. "Of thirty-one patients who were treated with energetic vomits, twenty-six expelled false membranes in the efforts of vomiting, and of this number fifteen recovered. Of twenty-two patients with whom vomiting was employed in a timid manner, and as secondary medication, only two rejected false membranes, one recovered, the remaining twenty *rejected no membrane, and all died*."*

The persistent use of antimony in nauseating doses is, I think, seldom or never productive of benefit, and often occasions the most alarming and pernicious prostration of strength.

The frequency with which emetics should be repeated, is a point of as much importance as the selection of the agent. If we fail to give them as often as indicated, we do not secure their full benefits; if we administer them too frequently, we hazard the strength and proper support of our patient. No certain rules can be laid down upon this point. When intelligent nurses are in attendance, they should be instructed to administer an emetic whenever the throat seems very much clogged with tenacious mucus, or when suffocation is imminent. Their use is to be deprecated unless some such indication calls for it, and we ought especially to avoid giving them, in the latter stages of the disease, so soon after nourishment has been taken, as to cause its rejection.

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* Guide du Medicin Practicien.

CALOMEL.—It has been very generally admitted that calomel seems to exert some control over exudative processes, though in what means this influence is exerted, is a point difficult of explanation. My experience leads me to regard its action in croup with favor, and, except in very ataxic conditions of the system, I always resort to its use. I generally employ it in cathartic doses at first, and afterwards as an alterative, and continue it, at suitable intervals, until amelioration of symptoms occurs, in cases of recovery, and in fatal cases, until oollapse supervenes. I sometimes prescribe it alone, or, if a strong pulse or dry skin exist, combined with small portions of ipecac; or Dover's powder, if active catharsis is apprehended.

TOPICAL APPLICATIONS.—The attention of the medical world has recently been much invoked to this mode of treatment. Very few doubt the beneficial effects to be derived from topical medication in affections of the respiratory ways, if feasible, but many deny the practicability of making such applications. Among the latter class is Mr. Erichsen, who states, "that there is no reliable evidence that the sponge probang has ever been passed through and beyond the vocal cords." The limits of this essay will not permit me to discuss this important question further than to remark that it is difficult to reject the mass of testimony disproving the assertion of Mr. Erichsen. Yet I am far from willing to accept all the instances of reported introduction of the sponge within the larynx, as true. I imagine that the operation is rarely performed, and so difficult of accomplishment, that in making local applications in croup, the physician is not justifiable in regarding the penetration of the larynx as the *sine qua non* of beneficial influence. I do not doubt that the most practicable method of introducing the sponge within the larynx, is that described by Sir Charles Bell. After stating the strength of his solution and the curve of his wire probang, he thus describes his procedure: "With the finger of my left hand I pressed down the tongue, and stretched the forefinger over the epiglottis, then directing the wire along my finger, I removed the point of the finger from the glottis, and introduced the pad of lint into the opening, and pressed it with my finger." A similar method has been practiced hy Dr. Palmer, of this city. We may readily realize the difficulty of this manipulation upon the diminutive organs, and amid the struggles of the child, although the object was only to reach the lips of the glottis.

I think, however, that benefit may and does accrue from this species of medication, without penetrating the larynx; and I attribute those beneficial influences to its detersive effect upon the throat, to the local influence of the solution upon the parts it reaches, and to the frequent dislodgement of membrane it occasions by the succussion and vomiting attending the application. That the local action of nitrate of silver upon exudating surfaces is beneficial, is abundantly proved by M. Empis, who witnessed its modifying influence upon the cutaneous exudation of diptheritis.

Some cases are recorded where topical applications alone, seemed to have jugulated the disease, and, from analogy, I am persuaded that such instances would frequently occur, if the application could be had recourse to early, before the exudation has appeared to any extent upon other surfaces than the pharyngeal.

Dr. Eben Watson's experiments,* led him to conclude that the more intense the local inflammation was, the more feeble the solution should be. I am unable to decide upon the propriety of this conclusion so far as regards its effect upon the local blood stasis and the infiltrated membrane, but consider an important result from its use to be its obtunding influence upon the increased nervous susceptibility of these parts; and for the purpose of producing this effect, think the stronger solutions are indicated. Guersent considers it best to use a very concentrated solution, and apply it but once a day. I am satisfied it is the best practice to use a strong solution and apply it from one to three times in twenty-four hours.

2. *To Treat the Complications.*—The laryngismus is the most common complication of croup; in truth it is rarely absent, and to whatsoever cause it may be due, its control is at all times an important indication of treatment. The best remedies for this purpose are probably opium and hyoscyannus, but as the former sometimes acts irregularly on the constitution of children, preference should be given to the latter. This narcotic, administered in doses

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* Braithwaite's Retrospect, No. xvi.

of from half a grain to a grain of the extract every two or four hours had, in some cases under my charge, a most happy influence in calming the spasmodic action of the laryngeal muscles. Dr. Parrish, of Philadelphia, speaks very highly of the anodyne effects of injections of assafœtida and laudanum. Whenever there is found decided tendency to periodicity in the recurrence of paroxysms, aside from that induced by sleep, quinine is indicated. In a very large majority of cases of croup, I am satisfied that its effects, if not beneficial, would at least be innocuous; so that if a doubt exists as to the propriety of its use, it may still be employed, without fear of evil consequences. Its good effects in an uncomplicated laryngismus are generally recognized by the profession.

Pneumonia, bronchitis, and the exanthemathous diseases are common complications of croup. They should be met by their usual treatment modified according to the debilitated condition of the patient. Guesrent considers bronchitis as not an unfavorable complication, since the profuse secretion to which it gives rise favors the solution of the false membrane.

3. *To sustain the strength of the patients.* The importance of this indication is obvious to the physician who bears in mind the fact that separation of the membrane and cure of the patient will spontaneously result if life be sustained a requisite period; consequently, if the usual tendency of the disease to death by suffocation cannot be averted we should at least exercise care that the patient does not perish from exhaustion. An adequte amount of simple nourishment should be allowed throughout the disease, and the first indication of failing vital powers met by wine whey and weak toddy. Instead of producing arterial excitement, these stimulants, especially when given warm, have often been followed by favorable diaphoresis and a sensible mitigation of the expectoration.

The most remarkable recovery from croup that I ever witnessed, seemed to date from the moment the patient was again placed to his mother's breast, and the free use of weak toddy enjoined.

Summary of Treatment. When a physician is called for the first time to see a case of croup, and by inspection of the fauces, and a careful grouping together of the symptoms, establishes the diagnosis, a point of great importance is to ascertain the stage of development of the disease. If he is so fortunate to see his patient during the stage of invasion or even immediately after the symptoms of confirmation have announced themselves, he may often hope to cut short the attack by the institution of vigorous treatment. The means best calculated to secure this end are the topical application of nitrate of silver, and the administration of an energetic vomit of ipecac and tartrate of antimony, followed by cathartic doses of calomel and the adjuvants yet to be mentioned. There are, I think, but few, if any, conditions of the disease, except that of collapse, where these remedies might not with propriety constitute the initiatory treatment. The first steps of treatment are, however, very important, since they frequently exercise an influence, either favorable or unfavorable, which lasts until the termination of the case. Unfortunately, circumstances often surround the physician to embarrass his decisions; such as the urgency of the patient's symptoms, and the distress of surrounding relatives, and their importunities for more active interference. Without reference to these, however, he should trust to the calm guidance of his own judgment, and adapt his treatment to the exigencies of the case. If the attack be sporadic, the system in a sthenic state, and the symptoms have proceeded with rapid march, he may with less hesitation resort to active medication; but if this is not followed by immediate and obvious benefit, it should be at once abandoned. It is far better to trust to the spontaneous decomposition of the deposit, than to persist in lowering measures, when they are found to detract from the patient's strength without arresting the progress of the disease.

If, on the contrary, the case has been in existence for a number of days, if the preceding catarrh has been long, and the symptoms of invasion slow in exhibiting themselves, and the progressive aggravation is either not manifest or not strongly marked, we may be justified in trusting to nature for the removal of the membrane, and direct our attention only to the general state of the system, to the modification of the spasmodic element in the disease by appropriate anodynes, and to the general surrounding influences. I regard an attention to this last one of the essentials to a successful result. The child should be kept free from all unnecessary agitation; every excitement, emotional or physical, adds to the difficulty of the respiration, and the increased poisoning of the blood; consequently the presence of strangers around the bed should be avoided, and all interruptions prohibited unless demanded by the urgency of the symptoms. It is probable that the remarkable success of Dr. Budd's treatment with the vapor bath, was in part due to the fact that his patients were kept in curtained beds free from interruption.

External remedies, such as blisters, baths, narcotic and emollient cataplasms have long been in use in the treatment of croup. I have never seen any evidence of good results from blisters, and reject them from the list of remedies. Tobacco has been the most common narcotic used endermically; it certainly controls spasm, but so often induces alarming prostration, that I never countenance its employment. I have attributed good effects, in some instances, to frequent inunction of the neck with soap liniment and laudanum. Warm poultices are soothing, but their weight is an inconvenience. The objections to baths, are the agitation and alternations of temperature to which they subject the patient. I regard, however, the influence of temperature and moisture as a most valuable adjuvant in the treatment of croup. The powerful influence of cold in diminishing the circulation of parts to which it is applied is well known. Dr. Bennett, in his 'Pathology and Treatment of Exudation,' gives as an indication of prevention and cure, 'topical application of cold and astringents which stimulate the capillaries to contraction.' A number of cases are on record where the cure of the disease has been attributed to the external employment of cold. Dr. Gore, of Bloomfield, Kentucky, has furnished me the notes of two cases of recovery, in which he ascribes benefit to the constant application of ice cloths to the throat. I think the application of cold should be restricted to the early stages of the disease, and its indication limited to the prevention of exudation. If used in this stage, I should advise a low degree of temperature, as better calculated to affect the deeper seated capillaries, and the better to secure its anæsthetic influence upon the laryngeal muscles. If the membrane be already formed to a considerable extent, the cold can of course do nothing to favor its removal, may even counteract the natural process of purulent metamorphosis, and should then be exchanged for external warmth. Jurine long since recommended vapor baths, and Dr. Budd has recently employed them with the most remarkable success. The plan of Dr. Budd is simply to place the patient in a curtained bed, and to prevent fright from the novelty of its position, its mother with it; then to place upon the foot of the bed a large vessel of boiling water, into which a heated brick is occasionally pluged; the curtains are then to be drawn around the bed, and the child kept in a state of quietude, the temperature being maintained at from 75° to 80°. It seems to me that almost every curative indication of confirmed croup is answered by this admirable arrangement. The laryngismus is subdued, the breathing of the child quieted, while the warmth and moisture hasten the solution of the deposit, invite the circulation to the surface, and promote diaphoresis.

In addition to the remedies already mentioned, I have been in the habit of admistering carbonate of soda in the latter stages of croup, upon the basis of an opinion long since advanced, that it favors the solution of the false membrane. Senega, squills, and tolu are also indicated in the latter stages.

In concluding this brief notice of the medical treatment of croup, I take the opportunity of quoting Valleix's instructions relative to the personal management of the patient:

"1. Lay the patient in such a position that he will have his head a little more elevated than his body.

"2. Remove from the chest and throat all clothes that embarrass the action of the parts.

"3. Preserve the air of the chamber at a warm temperature — guard the patient from currents of air.

"4. Give him drinks frequently, to remove the dryness of the throat and introduce a large quantity of fluid in the system."[*]

4. *To form an artificial opening for the air, when the occlusion of its natural passages renders it expedient.*—The expediency of bronchotomy in croup has been variously estimated. While some have gone so far as to contend that the physician who neglected its performance was chargeable with the death of his patient,[†] others have discountenanced the operation, as not increasing the chances of recovery, and consequently not worthy of the support of the profession.[‡] Undoubtedly, the old adage will apply here,

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[*] Guide du Medein Practicien.

[†] M. Trousseau se contente de dire que le Me′decin qui ne pratique pas la Bronchotomie est coupable de la mort du malade—Jousset.

[‡] Experience has shown that the operation has failed in the great majority of cases: and it is obvious that with our present knowledge of the nature of the disease. we can scarcely hope for good from its performance.—Stokes.

'*in medias res tutissimus ibis.*' The statistics of the operation show that it is worthy of countenance, since it affords the patient a 'plank of safety' when all others are removed. At the same time, the great number of failures should check any enthusiasm, tending to induce too much confidence in the operation, to the exclusion of sufficient medical means.

In France, where this operation is resorted to much earlier and under more favorable circumstances than elsewhere, statistics show a proportion of about one in five to be successful. Velpeau records 140 cases and 28 recoveries. Jousset 219 cases and 40 cures. Mr. Lawrence (Lond. Lancet for Dec., 1855), 216 cases and 47 cures. According to the observations of Guersent, Weber, and Ware, about 45 would recover out of 216 cases of confirmed croup, left without operation, but were we to take the same number of cases at the period when bronchotomy is usually resorted to, and trust them to medical treatment alone, I am satisfied the mortality would largely exceed that of those submitted to operation. I think, therefore that preservation of human life is, in the aggregate, subserved by bronchotomy, although cases occur where recovery would have taken place without the operation, and others again where fatal results follow in consequence of its performance.

The question being decided as to the propriety of the operation, it is an important point to know *when* it is expedient. This can only be determined by the gravity of the case and the discernment of the physician. Guersent says, 'when the child is menaced with asphyxia, and the treatment fails to give relief, a fatal termination is imminent. We should not stop to consider the situation or extent of the false membranes; the child will die in five or six hours or sooner, and tracheotomy, however doubtful the result, is rigorously indicated. If the false membranes have only attained the larynx, the case is favorable; but delay lessens the prospect of success; in croup, as in strangulated hernia, we should always, without precipitating the operation, have the probable necessity of performing it in our mind.'* The objection of parents is one of the most common obstacles to the performance of bronchotomy in croup. The physician can, however, conscientiously assure them that the operation is not itself dangerous, and that it is comparatively painless on account of the anœsthesia which the poisoned blood induces.—(Meigs).

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* Braithwaite's Retrospect, No. XIV.

When bronchotomy is decided upon, it remains for the physician to choose between tracheotomy and laryngotomy. The former operation is the more difficult, but when performed with the requisite precautions, probably more successful, since it forms the opening with more certainty, between the point of obstruction and the lungs. Laryngotomy is more simple, more readily and rapidly performed, and if the operator could assure himself that the membrane extended but a little way into the trachea, should always be selected. It is not unlikely that too much stress has been laid upon the necessity of penetrating the trachea below the membrane. Dr. Craig* has published a very interesting case of successful tracheotomy in which the membrane reached an inch below the lowest point of the incision. M. Saloy† has related a case of successful laryngotomy where the membrane also extended below the incision. Whichever operation is selected, a free incision should be made into the tracheal canal, for the strong current of air favors the ejectment of the membrane. It also enables the physician to facilitate the removal by the forceps or sponge; or if he possess the professional devotion, and self-forgetfulness of Roux, Saloy, and Erichsen, he may place his lips to the wound and by a strong inspiration suck into his own mouth the blood, mucus and membranous debris, which frequently prevent respiration after the opening is completed.

Bronchotomy does not seem to have been often practiced in the West, in the treatment of croup. Dr. Gross of this city, during his residence at Cincinnati, performed it upon a child nine months old, a patient of Drs. Wood and Rives of that city. The disease had existed upwards of a week, producing great exhaustion. Some improvement followed, but it was only transient; in a short time the symptoms were as bad as ever, and death ensued in less than twenty hours after the operation.

Dr. J. B. Flint has operated once, his patient was moribund and the operation unsuccessful. Drs. Eve and Haskins of Tennessee have both operated, the former in two cases, the latter in one; their patients were all in extremis, and all died. Dr. Asbury Evans of

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* London Lancet for July 1853.

† Archives Generales Mai 1849.

Covington, has operated once. His operation, although performed under disadvantageous circumstances, gave the most flattering promises of success. Dr. E. remained with his patient, a boy of 8 years, for twelve hours succeeding the operation; he then left him 'calm, free from pain, breathing without difficulty—had slept easily,' shortly after his departure, the imprudent mother, contrary to express injunctions, 'raised him up to give him a drink—the tube slipped out, the patient himself tried to replace it, but not succeeding in penetrating the trachea, perished before assistance could arrive.'

Other instances have undoubtedly occurred in the West, in which the operation has been performed for croup, but want of time has prevented me from obtaining authentic information respecting them.

In conclusion, the writer does not flatter himself that he has thrown any new lights upon either the nature or treatment of this disease, but if he succeeds in attracting the attention of the medical profession in the West, to the importance of the subject; and to the necessity of gathering new facts for the elucidation of its obscure pathology, and the improvement of its treatment, so as to abate its mortality, his object will be achieved.

ART. II.—*University Clinique. Cases and Observations in Surgery.* By PROFESSOR GROSS. Reported by S. W. Gross.

Ununited Fracture of the Humerus, of Eleven Months' Standing.

JAMES MARTIN, aged twenty-two years, of Crittenden county, Kentucky, applied to Professor Gross, on the 13th of October, 1855, on account of an ununited fracture of the left humerus, of eleven months' standing. He states, that, whilst hewing timber, a large piece flew off and struck his arm. At the time of the accident, he was perfectly temperate and healthy. Two months elapsed before any thing at all was done for him, when he was treated by an old woman, who applied some apparatus, which was allowed to remain on for nearly eight weeks before he sought surgical advice. He was then treated by a regular practitioner for three or four months in the usual manner. At the end of this time, finding that he had received no benefit, he abandoned all attempts at relief until he consulted Professor Gross; thus allowing six months to elapse without any treatment whatever.

The present condition of the parts is as follows: There is a fracture of the left humerus about three inches above the olecranon process, allowing of a great deal of lateral motion; in fact, a species of false articulation exists. The elbow joint is perfectly rigid, and bent at almost a right angle. The muscles of the arm and fore-arm are atrophied. There is no pain in the part at any time, and no constitutional disturbance. As far as can be ascertained, the patient has never suffered from any debilitating disease or any depressing cause whatever.

Professor Gross, having for the past two weeks kept the arm perfectly at rest by the application of splints and bandages, without experiencing any benefit, brought the patient before the class for the purpose of an operation. This consisted in the introduction of a trocar between the fragments of the fractured bone, and drilling them at several points. The splints and bandages were re-applied, and perfect rest of the part enjoined upon the patient. He was also directed to have nutritious diet, and take exercise in the open air.

October 20th.—Martin has been doing well. For a few days after the operation, he suffered some pain; but had no untoward symptom. The dressings will be permitted to remain on for some days longer, as there is no necessity for removing them.

November 3d.—The patient was again brought before the class, and the dressings removed. Some union seemed to have taken place. The trocar was again introduced, and the drilling repeated.

December 1st.—As Martin has had two operations of drilling the bone performed, and no material benefit has resulted, Professor Gross has decided to resect the ends of the bone, and introduce a wire. The operation was as follows: The patient having been put fully under the influence of chloroform, a longitudinal incision, about three inches in length, was made on the posterior aspect of the arm, through the triceps muscle, over the site of the fracture. The lower fragment was found to overlap the upper about an inch and a half. The ends of the bone were surrounded by a strong fibrous membrane, which was firmly adherent to the neighboring parts, and formed a sort of a shut sac, in which the bone was embedded. About an inch of the lower portion of the upper fragment, and half an inch of the upper portion of the lower fragment, were removed with a delicate saw; but on account of their firm adhesions, and especially the shortness of the lower fragment, some difficulty was experienced in bringing them entirely into view. The fragments were conical, rounded, and smooth, and invested with a thick fibrous periosteum: no synovial membrane or fluid existed. The next step of the operation was drilling the ends of the bone, which having been done with a common gimlet, a piece of wire was introduced through them, to maintain them in apposition. The ends of the wire were twisted together, and allowed to protrude from the wound. Three sutures were introduced, and adhesive strips applied. The usual dressings, consisting of three splints, one anterior and two lateral, and the roller, were re-applied, and the arm firmly supported. There was very little hemorrhage, and no vessel required ligation. As the patient suffered a great deal of pain, a grain of morphia was given him immediately after the operation. Very little constitutional disturbance followed. For the first few days, the patient suffered some pain, was very restless, and had no appetite. Nearly all the wound healed by the first intention, and at no time was there much swelling, discoloration or suppuration. At the end of the eighth week, the process of re-union had advanced so far, that there was scarcely any perceptible motion.

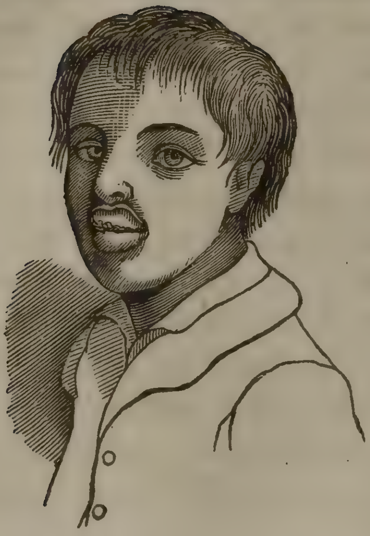
On the 4th of March, 1856, the wire was removed, and in a few days, the patient went home perfectly restored—the arm being about an inch and a half shorter than the sound one. It is proper to add, that, by frequent passive motion, the elbow-joint was gradually regaining its original function.

Case of Hypertrophy of the Gums.

The subject of this remarkable case was James W. Outland, aged ten years, a native and resident of Calloway county, Kentucky. The enlargement of the gums was first perceived when he was about nine months old, though, from the history of the case, there is great probability that it had existed from his birth; for it had already, when the attention of the mother was first attracted to it, acquired some bulk. About this time an abundant flow of saliva commenced, so irritating as to erode the chin and other parts with which it came in contact. This continued, without any material interruption, for several years, when by degrees it ceased, the secretion diminishing sensibly in quantity, as well as losing its acrid qualities. Almost simultaneously with the enlargement of the gums, was observed an enlargement of the tonsils, leading to embarrassment of breathing, which has remained up to the present time. Both affections gradually but slowly increased, the general health, meanwhile, being good. About the fifteenth month, the two middle incisors of the lower jaw appeared, and after sometime the corresponding teeth above. The gum, however, was already so large as to conceal nearly the whole of these organs. By and by the inferior deciduous cuspid and first molar of the right side issued, and these were the only teeth that were ever visible, except those represented in the cut, prior to the operation performed for the boy's relief.

The condition of the boy when he was brought to Professor Gross, on the 25th of December, 1855, by his friend Dr. Lynch, of New Concord, Kentucky, was as follows: His body was short, but thick set, his eyes black, the pupils dilated, and the lids fringed with long lashes, the hair dark, the face pale and pasty, the head rather ill-shaped, and the abdomen preternaturally prominent. The extremities were cold, the bowels regular, and the appetite good. The respiration was embarrassed, and performed with a kind of croaking sound. At night he snored very loud, and often waked up struggling for breath, the voice being muffled, and the articulation indistinct. His pulse was natural, his strength was rather impaired, and his muscles were thin and flabby.

Projecting from the anterior part of the upper jaw was a tumor of a pale color, inelastic, perfectly insensible, and of firm consistence, presenting very much the appearance of the snout of a hog, as represented in the annexed sketch. It stood off very obliquely, and received but a very partial covering from the corresponding lip. It was rough on the surface, and was about an inch and a quarter in its antero-posterior diameter, its length having been about one inch and a half. At its free margin, which was quite irregular, was seen the tip of the left central incisor. Extending back from this tumor, on each side, the whole length of the jaw, was the enlarged gum, forming a thick, broad ridge, completely embedding the teeth. At several points, particularly behind, the morbid growth

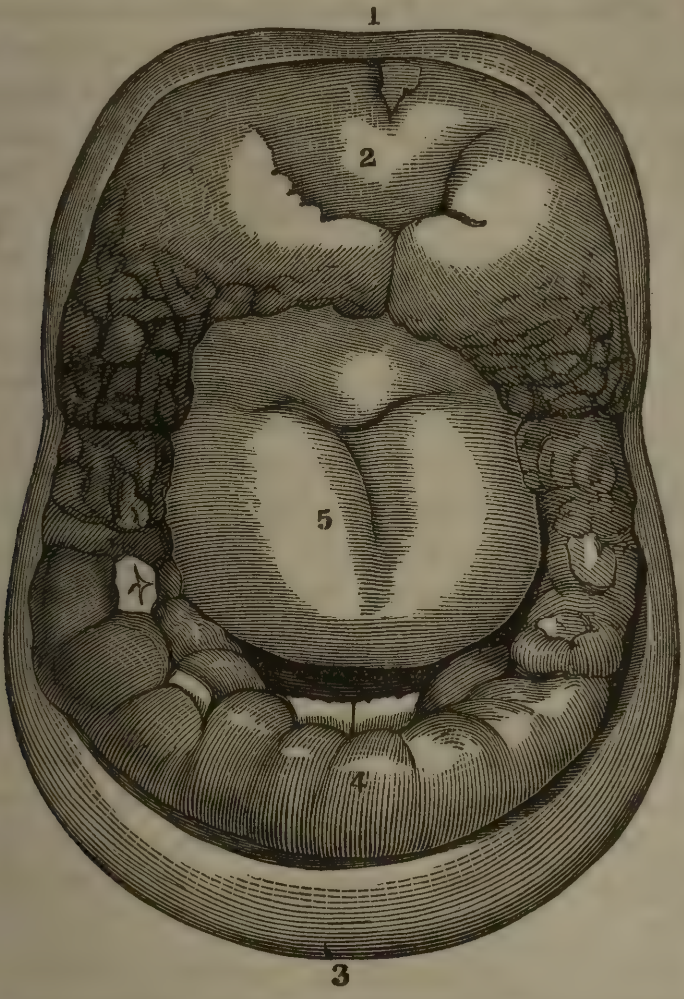


was more than nine lines in width; in front and at the middle it was less. It was of a more florid color than the main tumor, but of about the same degree of consistence. Opposite the site of the bicuspid teeth, on each side, it exhibited a remarkably granulated appearance, the excresences having a pedunculated form, and being folded upon each other. Projecting toward the roof of the mouth, it greatly encroached upon this cavity, lessening its capacity, and thus interfering with its functions, as well as with speech and respiration.

The lower gum was in the same condition as the upper, equally hard and insensible, but less developed. It was of a bluish florid complexion, and larger in front and behind than at the intermediate points; its free surface was uneven, and so prominent as to hide all the teeth, except the central incisors, the point of the right cuspid, and the cusps of each deciduous and first permanent molars. The appearances here described, are admirably represented in the accompanying cut.

On looking into the fauces, both tonsils were found to be much enlarged, the left, however, more than the right, and the arches of the palate were in a state of chronic inflammation. The uvula was also somewhat hypertrophied. As the respiration was much embarrassed by the state of the tonsils, Professor Gross excised the redundant portion of the left of these organs as a preliminary step to the treatment of the other and more important affection.

Various plans of treatment had been employed for the relief of the boy before he came under Professor Gross, but all without advantage. Judging from the long continuance of the disease, and the great hardness of the parts, he became soon satisfied that the only remedy that held out any prospect of success was excision. Not knowing what might be the degree of vascularity of the morbid growth, he determined to attack the lower one first, removing as much at one sitting as the circumstances of the case would admit of. The patient being seated upon a chair, with the head supported against the breast of an assistant, he pared away the gum closely from the jaw and teeth, first in front and then



1 is the upper lip; 2, the tumor on the upper jaw; 3, the lower lip; 4, the inferior jaw and gum; 5, the tongue.

behind, using for this purpose the knife, gum-lancet, or chisel, as appeared to be most expedient. About five ounces of blood, principally of a venous character, were lost during the operation. Behind, the excision was not very perfect, owing to the want of suitable instruments to scrape away the thickened and callous structure. No pain was experienced during the operation, and it is therefore reasonable to suppose that the hypertrophied gum was perfectly insensible. Two of the temporary teeth were removed, the permanent set being found as well developed, or nearly so, as usual in children at this age. They were of a beautiful white color, and firmly rooted in their sockets.

On the fifth of January, three days after the above operation, the boy was taken before the medical class of the University of Louisville, with a view to the removal of the upper gum. Dr. Goddard, the eminent dentist, on this as on the former occasion gave Professor Gross his valuable assistance. By means of a chisel, slightly curved, and not very sharp, the greater portion of the morbid mass was easily pared off in front, exposing the permanent incisors, the two central of which were found to be fully developed, while the lateral incisors were only about one third grown. In excising the gum from the posterior surface of the jaw bone in front, the anterior palatine artery of the right side was unavoidably laid open, and bled considerably before the flow could be arrested. The larger pieces of the gum being thus removed, Dr. Goddard cut and scraped off the remainder by means of scaling instruments, such as those used by dentists in removing tartar from the teeth, and which were found to be admirably adapted to the object. The proceeding was necessarily tedious on account of the frequent spitting of the patient, and was attended with the loss of at least six ounces of blood. Indeed, the lad became quite pale from this cause. No pain was experienced. One of the deciduous teeth was forced out during the operation. The lad now has in his upper jaw, the two central incisors and first molars fully developed, the lateral incisors about one third grown, the cusps of the second molars just visible, and the temporary cuspids and second temporary molars.

In the lower jaw are the four incisors and first permanent molars, the left second molar about one-fourth grown, and the other molar just emerging, with the right temporary cuspid and left temporary molar.

Finally, a third operation was performed on the 17th of January, mainly by Dr. Goddard, consisting in the removal of remnants of gum between and around the teeth. The instruments employed on the occasion were the same as on the former. By means of these, every vestige of the morbid growth was cut and scraped away. The operation was again tedious and somewhat bloody, but not as much so as before. It was followed by great soreness of the whole mouth, by inability to masticate food, and even by considerable difficulty of deglutition, continuing for nearly a whole week. In consequence of these occurrences, free use was obliged to be made of anodynes, especially at night. Since the last two operations the boy has been taking sulphate of iron and quinine, to improve his general health and the condition of the blood, which, as evidenced by the pallor of his countenance, has been much impoverished by the repeated losses sustained in the excisions of the gums. He left Louisville on the fourth of March, still rather pale and feeble, but in fine spirits, and with a good appetite. A few days before his departure, Professor Gross excised a portion of the right tonsil, the left, as already stated, having been removed a few days after his arrival in town. His breathing is still too loud though he no longer snores and perspires during sleep. Orders were given to keep up the steady use of tonics, to make him exercise freely in the open air, and to put him on a plain but nutritious diet. The tonsils and arches of the palate are to be mopped every fourth day with a pretty strong solution of nitrate of silver. The teeth are covered up to their necks with healthy gum; and, thus far, there is not the slightest appearance of a return of the morbid growth.

On closing the jaws so as to bring the grinders in contact, a space is found to exist between the front teeth, three quarters of an inch in extent. The upper lip is gradually regaining its proper position, and the contour of the face is greatly improved.

ART. III.—*Necrosis of Stump of Femur;* By T. M. MARKOE, M. D., Attending Surgeon to the New York Hospital.

JAS. THOMPSON, æt. 26, had his left thigh amputated at the New York Hospital. May 12th, 1855, for suppuration following an injury to his knee joint. The stump healed favorably, until only a small ulcer remained, and he rapidly regained flesh and strength. In August it was observed that the wound had not yet cicatrized entirely, and on examination, it was discovered that the end of the femur was greatly enlarged, and a probe, passed through the opening, detected dead bone. The stump now began to be occasionally painful, the discharge increased, irritative fever in a slight form set in, and he began to lose ground. About the 1st of September it gave him so much trouble that an incision was made upon the end of the stump, and the whole circle of the cut end of the femur was found necrosed. An attempt was made to pull out the dead piece with a pair of strong forceps, but it seemed firmly attached, and was left. The mischief in the stump increased, abscesses formed, and opening, left sinuses running in various directions. The discharge became very profuse, and the patient more and more reduced. About the first of October, thinking that by this time the process of separation must be complete, the end of the stump was again opened and the sequestrum exposed and seized with the forceps. On making very strong and steady traction, it became evident that the piece was loose, and soon it started from its bed, and was drawn out about three-fourths of an inch, but beyond that point no force could move it. It could be pushed back and moved a little from side to side, but it could not be drawn any farther out. Supposing it was locked in by bony granulations from the involcrum, it was left drawn out as far as it would come, and each day traction was made upon it, hoping thus to cause the absorption of the new bony growth which impeded its exit. This result however was not realized, and at the end of a month the sequestrum was as inextricable as ever, and the condition of the stump, as well as of the patient's general health, was evidently deteriorating. On the 2d of November, nearly six months from the time of the amputation, I made a free incision over the anterior and outer face of the stump and exposing the involucrum. I commenced removing with a chisel that portion which surrounded the end of the sequestrum. The removal of three fourths of an inch all round of the involucrum did not liberate the dead piece. I then broke up the ossific matter which had formed within the cylinder of the sequestrum, and then it was discovered that from this internal ossification, a spur or process passed through an opening in the sequestrum and joined itself to the involucrum without, thus nailing the loose cylinder of the dead bone in its socket, but permitting it to move backward and forward about three-fourths of an inch. This spur being cut by the chisel, and the internal plug of bone being removed, it was found that the sequestrum was liberated and it was easily drawn out.

It was a complete cylinder of dead bone, worm eaten on its outer surface, nearly smooth on its internal surface, terminating above in thin irregular points, in all about 6 inches in length. The thickness of the walls of the cylinder diminished gradually from the point where it had been sawed off in the amputation, up to its upper extremity, where it terminated in the thin irregular points already mentioned.

From this time the patient's recovery was rapid and complete. No pieces of bone of any considerable size came away, and the stump, on its final cicatrization, was an admirable one.

This makes one of the four or five specimens which we have in our pathological cabinet, which have been removed during the past four years. Dr. Jas. R. Wood has recently had at Bellevue Hospital a similar case, in all except the locking in of the sequestrum.

[From a letter addressed to the senior editor accompanying the foregoing history, we take the liberty of extracting Dr. Markoe's remarks upon the probable cause of this singular necrosis. We are sorry that we cannot also introduce the Dr's two drawings, illustrative of his ingenious and rational ideas.]

"The fact of these tubular sequestra forming after amputation is well known. Several writers speak of them, and Erichsen, you will remember, gives a very good representation of one of them in his work on Surgery. The case which I send, seems to me valuable on account of the mode in which the dead bone became imprisoned in its involucrum, requiring an operation to free it, an accident which perhaps could not have occurred if the sequestrum had been pulled away earlier in the case.

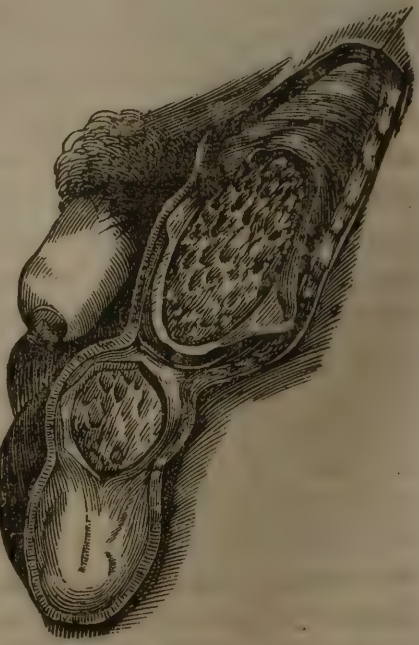
"In thinking of the causes which determined this condition, I have concluded that the most probable explanation is to be found in the fact that in a large proportion of femora, at least one half I think, the nutrious artery enters the bone at or below its middle, and is therefore liable to be cut off in the amputation, either within the bone by the saw, or before it has entered the foramen by the catlin. This artery, ramifying on the medullary membrane, supplies the inner surface of the femur, the outer surface of the bone receiving its blood from the periosteum. Now, if the nutritious artery be cut off, does it not seem likely that before the circulation could be restored through the spongy ends, whose vessels all enter through bony and therefore unyielding canals, the circulation of the small vessels supplying the inner portion of the femur might be long enough obstructed to cause the death of this portion of the bone, at least in some instances. From the cylindrical form of the sequestrum, from its being the inner cylinder of the femur, and from its limitation upwards, the suspicion would naturally arise that the form of the necrosis had something to do with the distribution of the medullary membrane. Indeed I believe Mr. Syme speaks of this connection, but without saying any thing as to the nature of the injury of the membrane which gives rise to the necrosis.

"If the explanation which I have suggested be not the true one, then we must look to inflammation of the membrane as the cause of the difficulty. This certainly is a possible explanation, but as far as I can judge from the cases that have come under my observation, there has been no evidence of the existence of medullary inflammation; on the contrary, the stumps have usually been considered as doing very well during the first month, and the necrosis has been revealed only by the unhealing condition of the wound. The medullary membrane itself, I suppose, never dies from this cause, but has its circulation gradually restored, and goes on secreting new bony matter which forms a thin internal involucrum, the outer volucrum being formed from the outer portion of the femur nourished by the periosteum."

ART. IV.—*Case of Bi-locular Hernia.* BY T. G. RICHARDSON, M. D.

CASES of hernia in which the sac is divided into two or more communicating compartments, although not unfrequently observed by surgeons since Arnaud first called attention to the circumstance (A. D. 1749), are comparatively rare, and of sufficient practical interest always to deserve a careful and accurate record. The writer had occasion recently to dissect a hernia of this bi-locular variety, a good representation of which is given in the annexed cut.

The tumor in this instance was an acquired, left, oblique, inguinal epiplocele, cylindroidal in form, extending into the scrotum to the distance of about four inches below the external abdominal ring, and measuring uniformly throughout, except at the interlocular constriction about an inch in diameter. Upon laying open the main portion of the sac below the external ring, it was found filled with omentum, which was coated with granular fat and unadherent; only at the bottom of the cavity the mass became suddenly very much constricted where it passed through the narrow opening communicating with the other compartment. This smaller cavity,



situated between the preceding and the vaginal tunic of the testicle, to which latter it was slightly attached, was about the size and shape of a pigeon's egg, and also completely stuffed with healthy looking fatty omentum. The opening of communication between the two cavities was not larger than a crow quill, its margin thickened, rigid, and unyielding, and its passage already plugged by the connecting process of omentum. Upon the posterior wall of the larger cavity was also found a valvular semilunar fold of the lining membrane, situated about midway between the constriction and the external abdominal ring, and projecting horizontally forward about one-third of the way across the cavity. As may be readily imagined the contents of the tumor were irreducible, owing to the complete incarceration of that portion contained in the smaller compartment.

As stated above, these occasional peculiarities in the hernial sac have been known to surgeons for a long time, and several varieties have been described. Thus some writers speak of having seen as many as three constrictions, the several compartments resting in a line with one another. In other instances, two cavities have been observed lying parallel, side by side, or one immediately in front of the other. The occurrence is said to take place oftener in congenital than acquired hernia, and in the latter is almost limited to the inguinal variety. It is also most commonly found in omental hernias, although it has been occasionally seen in connection with enteroceles, an instance of which is thus described by Scarpa: 'I have once only had an opportunity of seeing this species of constriction of the body of the sac in the dead body of a hernial patient. In this subject the hernial sac, towards its middle, was observed separated into two sacs, disposed in two planes one above the other. Between the two sacs, there was a hard margin elevated like a ring apparently formed by a doubling of the sac, which left a round aperture of communication between these two sacs, the upper of which was larger and deeper than the lower. Both of the sacs were filled by a loop of small intestine of unequal length. It was not difficult in the dead body to draw up the larger portion of the intestinal loop occupying the upper sac, and make it pass into the abdomen; but as soon as I began to draw back the portion of intestine which had descended into the lower sac, I met with difficulty in making it recede through the opening of communication between the two sacs.

Having returned both of the loops of intestine into the abdomen on passing a finger down through the stricture into the inferior sac, I found that the finger descended so low down into the scrotum as to be concealed behind the testicle.'

Two modes of accounting for these constrictions have been offered. In the one, lymph is supposed to be deposited upon the exterior of the sac in consequence of some accident, and, in undergoing organization, contracts, as it is well known to do under other similar circumstances. The other is based upon the fact that the mouth and neck of the hernial sac are not, as a general rule, closely adherent to the surrounding fibrous structures, and in a hernia long stationary, may become rigid and unyielding, so that upon the recurrence of the original cause of the protrusion the whole of the old sac, neck and all, are carried down by the superincumbent force. This latter seems to be the most plausible explanation, and will account for the double and triple constrictions referred to. It also accounts for the partial divisions of the sac by means of projecting septa, one of which was found in the preceding case, these crests or septa being the remnants of the original neck of the sac.

PART THIRD.

Bi-Monthly Periscope.

SURGERY.

1. A CHAPTER OF ACCIDENTS, CONSISTING OF SKETCHES OF INSTANCES OF EXTRACTION OF FOREIGN SUBSTANCES FROM THE NATTURAL OPENINGS OF THE HUMAN BODY;—by *R. Thompson*, M. D., of Nashville, Tenn. As no case has occurred in my practice, since we last met, of sufficient interest to be made the subject of a report, I have concluded as a substitute, to offer a condensed statement of a few cases of the above description which have occurred in the course of my past experience; not presented, however, because particularly novel, either in kind or management, but to fulfill my engagement to "report a case or read an essay," and to afford perhaps, a little momentary interest.

The first case I will introduce occurred in 1826, the first year I stood alone as a practitioner. A black bug, of a species well known to the inmates of log tenements, of abont the size of one's little finger, exceedingly frisky and fond of running into holes, being out on an exploring expedition one night, and having a desire to examine the inner anatomy of the human cranium, or in search of something "good to eat," slipped himself into a boy's ear while asleep; but, like many other adventurers, he soon found a limit to his forward movement, and by reason of the tightness of the fit, was unable to "advance backwards." His ineffectual struggle for freedom soon awoke the boy to a consciousness of intense agony, extorting cries which brought an elder brother to his assistance, who having ascertained the difficulty, concluded to persuade the intruder to hold still by giving him a dram, and accordingly poured the meatus full of fourth proof, which soon had the desired effect, for the insect lay as quiet as a "bug in a rug," and permitted the boy to sleep till morning, when he was brought to me to have the thing extracted. But this was no easy matter — the forceps could not be made to grasp it without causing an amount of suffering which the little fellow would not bear. I accordingly devised an easier way: drawing the temper out of a knitting-needle, and having bent the end, hammered it into a very acute angle, and then by filing converted it into a spear with a barb. This I cautiously insinuated into the body of the insect, and manged to fix the barb into the hard substance which unites the wing to the body, which afforded a point sufficiently stable to enable me, by gentle traction, to extract the thing with but little suffering to the patient.

The next case I will describe occurred about two years subsequent to the above. A child of about a year was playing with its mother's thimble, and as children instinctively put every thing into their mouths, this of course went there, and getting pretty far back and tickling the glottis, a spasmodic effort to vomit threw it above the soft palate immediately behind the septum nares. The family physician was sent for, who, seeing that the child breathed through both nostrils, decided that the thimble had been swallowed; but the mother not being satisfied, two other physicians from a neighboring county town were called in, who, after exploring the nares with a probe and meeting with no thimble, also pronounced it swallowed, and put the child upon acids to dissolve it. But as its sufferings continued to increase I was sent for. From certain external signs—such as suffusion of the eyes—some enlargement about the root of the nose, &c., I became satisfied that the thimble must be in the nose, and as the other physicians had failed to detect it, I judged it must be in the position I have indicated. I gave my probe a curb to suit the duct of the nares, and then a side curve to bring the point behind the septum, and asked the mother if the doctors had used a probe of that form? She said they had not. I did this to satisfy her, she being opposed to my probing, as she said it would give the child unnecessary pain, "as the thimble was not there." With this instrument I found the thimble the first effort, and giving the probe to the mother, she too became certain, from the firm resistance, that the body was there, and became urgent that I should immediately extract it. But I knew that it was easier found than removed, and refused to make any effort until the family physician should be with me; who, by appointment, met me the next day. I had prepared a strong iron probe with the necessary curves, square at the end, and ridged so as not to slip when brought to bear upon the edge of thimble, the only chance being to push it into the fauces and extract it from thence. He undertook the task of dislodging it, while I stood ready with my forceps in hand prepared to seize it the moment it should drop below the palate. After much difficulty he succeeded, but the moment it dropped below the palate the pharyngeal muscles seized it with a spasmodic grasp that the hold of the forceps gave way twice without bringing it—in the meantime the child was dying of asphyxia, the glottis being entirely closed. In this extremity I threw away the the forceps, and thrusting my finger forcibly into the thimble, and contracting the muscles so as to tighten it, and giving it a twisting tractile motion, was fortunate enough to dislodge it, much to my own gratification, as well as to that of the friends of the sufferer.

The next case I think worthy of notice occurred in 1835. A little fellow, out of sheer wantonness, pushed a large grain of corn up his nose. It was some hours before his father was made acquainted with the fact, and several more before I saw him ; long enough to enable the grain to swell to near double its natural size, and imbed itself in the soft parts so that the forceps could not be made to grasp it. Again applying to the knitting needle, I bent the end into a neat little hook, and pressing this sideways between the kernel and the septum, and then turning it, fastened the hook over the upper end of the grain, and now applying a thin delicately polished slip of reed to the other side, so as enable it to slip, by a gentle drawing motion succeeded in dislodging it.

But shortly after this, I met with another case which offered more difficulty. A number of children were amusing themselves hunting shells and round pebbles on a little island, and having found a very pretty oval pebble conceived the idea of picking it up with the ear. One little girl in order to facilitate the operation, placed the pebble on its end and forced the other into the meatus; and while making some awkward efforts to extract it, pushed it further in until it rested upon the tympanum ; every further effort was now the cause of suffering, and it was suffered to remain. The children being fearful of rebuke, failed to communicate the accident to the older members of the family until the parts had become much swollen and excessively sensitive. In this condition the body could not be grasped by the forceps without causing great pain, so I again resorted to invention. The spear would not do, as it could not penetrate the body, the hook would not answer, as the body was a smooth cone and offered no point upon which it could be fastened, so I concluded to snare it; so, procuring a wire which had helped to form the spring of an old fashioned suspender, I pushed a fold of it beyond the pebble, and holding one part in portion by a slip of polished reed, by means of another brought the wire round the upper portion of the cone, and then by twisting the ends together made it embrace the pebble, so as to enable me to extract it with very little difficulty.

Since then I extracted a large bean from a little fellow's nose by the same snaring process.

The next case I will mention did not require much skill of execution, but a good deal of presence of mind and promptitude of action. While casually in a neighboring village to where I then lived, while walking down the street, a lady and two grown daughters came rush-ing out of their house, screaming most frantically, and exhibiting every other sign of intense agony and affright. I knew them well, and demanded the cause of alarm, but failing to attract attention, I at once entered the apartment I had seen them emerge from, and passing on through open doors at length reached the nursery, where I found the youngest, a fine boy of some six months, lying on the floor apparently quite dead. Perceiving from the color that it was asphyxiated, I suspected it might be choked, and thrusting a finger into his mouth discovered a tough mass completely filling up the posterior fauces, and hermetically sealing the glottis. I soon succeeded in loosing and detaching it, and then set up an artificial respiration by connecting its lungs with mine. After a few inflations, I had the satisfaction of perceiving spasmodic efforts at respiration, and by the time its mother had screamed up a respectable crowd to condole with her for the loss of her youngest born, I was prepared to return it to her alive, and change the proffered sympathy into a burst of gratulation. In this case the child had been fed with clammy biscuit, which by a sucking motion of the tongue had been plastered upon the roof of the mouth, until by additions it excited a violent effort to swallow, but it was no go—a mere projection from the mass entered the esophagus, leaving the main body nicely fitting over the orifice of the windpipe.—*Transactions of the Tennessee Medical Society—Nashville Journal of Medicine and Surgery, June*, 1856.

2. CARBONIC ACID GAS AS AN ANÆSTHETIC IN UTERINE DISEASES. A communication was read from Prof. Simpson, of Edinburgh, addressed to the Academy, *on Carbonic Acid Gas as a Local Anæsthetic in Uterine Diseases, etc.* It appears that Prof. SIMPSON was led to the use of carbonic acid gas as a local anæsthetic in painful conditions of the vagina, uterus, and neighboring parts, from reading the case of a lady treated by Dr. Rossi, of Italy, and reported in the second edition of *Pereira's Materia Medica*, vol. 1, page 155. In this case there was no organic disease, and merely an increased irritability, which was completely relieved by the injection of carbonic acid gas.

Prof. Simpson has frequently resorted to this treatment within the last two or three years; and, though not always with success, yet frequently with great relief, and occasionally with immediate benefit. Several cases were given in illustration. One lady who had been bedridden for years from pain and bearing down when standing erect, was almost entirely cured by injections of this gas.

His method of applying it is, to use a bottle having a flexible tube attached to the cork. The materials used for generating the gas, are tartaric acid, six drachms; bicarbonate of soda in solution, eight drachms; and water six ounces. The injection may be used several times a-day. Other materials may be used.

Prof. Simpson adds, that the employment of carbonic acid gas as a local anæsthetic to the uterine mucous surface and other parts of the body, is not a recent discovery. Dr. Dewees, of Philadelphia, speaks favorably of it in his work (*Diseases of Females*, page 269). Prof. Mojon, of Geneva, has used it frequently, and with decided advantage.

Referring to ancient writers, the author is disposed to consider the practice of burning certain aromatic and medicinal herbs, and applying the fumes to the interior of the vagina by means of proper tubes, to be but another phase of this practice—as carbonic acid is the result of such combustion.

He also ascribes the beneficial effects of mineral waters, in many cases at least, to the topical application by means of baths and injections of these waters, which generally hold in solution large quantities of carbonic acid. Female patients have assured him of the relief they experienced from uterine pains, while using the injections of the waters of springs as practiced at different German baths. The same is true in certain cutaneous diseases. The common effervescing draught, in gastric irritability and nausea, acts on the same principle. The injection of carbonic acid gas in dysentery, as practiced with success by Hey, of Leeds, in 1772, Perkins, etc., is directly in point. The benefit of the common yeast poultice, which gives rise to carbonic acid gas, may be similarly explained. Many other examples were alluded to in the paper, showing how frequently this agent is used in practice without recognition of its anodyne properties.

Dr. Detmold remarked that members would recollect that, about the year 1847, he called the attention of the Academy to certain propositions, which he then made, proving quite conclusively that carbonic acid gas is the efficient agent in causing anæsthesia. The carbonic acid may be given as such, or one of its chemical ingredients may be so administered, that, finding in the blood the other constituents of this compound, carbonic acid gas is generated, and anæsthesia, to a certain extent, is the result. Thus we may administer oxygen in large quatities, in the form of nitrous oxide, (protoxide of nitrogen, or laughing gas,) which has all the chemical re-actions of oxygen, but is much more soluble in water and the serum of the blood than pure oxygen, and, therefore is more readily taken up. This compound meeting the carbon of the blood, carbonic acid gas is formed in large quantities, with the production of anæsthesia to a certain extent. Or we may, on the contrary, administer the carbon, as the oxide of carbon or any of the hydro-carbons, alcohol, the ethers etc; in this case the blood again furnishes the other constituent of carbonic acid, oxygen, and anæsthesia is again the result.

The stage of excitement corresponds to the period of combination of these elements and the formation of the carbonic acid gas. If the gas is administered as such, there will be no stage of excitement, but if the constituents combine slowly, and the gas is generated in limited quantities, there will be a corresponding stage of excitement. Thus, in the stupor of drunkenness, carbonic acid is exhaled in normal quantities, but as the stupor passes off, large quantities of the gas are exhaled. The venous state of the arterial blood, during anæsthesia, is another proof that carbonic acid is being generated in large quantities. If it is true that in post mortem examinations of those dying while under the influence of chloroform, bubbles of air are found in the heart and blood vessels, it is highly probable that air is carbonic acid gas, unless, perchance, it has entered the circulation by some mechanical lesion.

The only means, in his opinion, of any avail in restoring a patient from profound or fatal anæsthesia, is artificial respiration, or such other means as, by exciting reflex action, will restore respiration, and thus hasten the elimination of the carbonic acid gas. It has been recommended in threatened and apparent death from anæsthesia, to resort to the inhalation of oxygen or nitrous oxide. Reasoning from the premises which he had given, such remedies would be in the highest degree dangerous. To satisfy himself in regard to this fact, he had made numerous experiments upon animals, and invariably found a fatal issue hastened by administering oxygen.

The subject of anæsthesia by carbonic acid gas, as illustrated in Prof. Simpson's paper, and the remarks of Dr. Detmold, elicited marked attention, and will lead to many practically useful deductions. This essay will in due time be published by the Academy, and will attract much attention from the novelty of the views expressed.—*Proceedings of the New York Academy of Medicine, March*, 1856.—*New York Journal of Medicine, May*, 1856.

3. CASE OF AMAUROSIS RELIEVED BY CATARACT OPERATION,; by *G. A. Kunkler*, M. D. Madison, Ind. In the month of August 1855, I was consulted by Mr B——, a Swiss farmer, residing in my vicinity, for an affection of his eyes. The patient is a strong healthy man, aged about 47 years, and of a plethoric diathesis. Some four years ago, he was injured by a horse kicking him upon the head above the right eye brow, which was followed by violent inflammation of the right eye; he recovered from this, and in the course of the same year, noticed that he was rapidly losing the sight of this eye, until, at last, it was extinct,

He paid no attention to it until about five months before consulting me, when he noticed that he was losing vision in the left eye, and when seen by me he required to be led by another person.

On examination, a fully developed lenticular cataract was discovered in one eye and amaurosis in the other. I at once proposed an operation, which was readily accepted by the patient. Accordingly, on the 12th September, the patient having been thoroughly prepared for a week previous, I proceeded to remove the cataract by extraction; which was successfully performed, chloroform being used, and the upper section of the cornea made. The inflammatory excitement which supervened was exceedingly violent, but was readily subdued by the proper antiphlogistic measures; the wound of the cornea healed at once by first intention, and on the 15th day he was allowed to use the eye in a moderately lighted room. On the sixth day after the operation, the patient began to remark that he saw quite distinctly with the amaurotic eye; and after allowing him to go out, it was fully confirmed, the eye having almost regained its natural power. The sight of the operated eye was also very good; the focus of the two eyes was, however, so different, that for a while he was compelled to keep one eye closed in walking abroad, but after procuring carefully adjusted glasses, he had no more trouble, and enjoyed comparatively good sight.

A somewhat similar curious case came under my observation during the spring of 1853; it was in a young man, aged 24, a music teacher, who was affected with lenticular cataract; which I suppose was a consequence of syphilitic iritis. The cataract was couched by myself and the patient lost the eye, by not paying any attention whatever to the strict instructions which he received regarding regimen; the inflammation which followed completely disorganizing the deeper structures of the eye. This patient noticed, after he got well, that the sight of the other eye was improved in a surprising manner. Before, he had not been able to read common print, if it was removed more than four inches from the eye; while now, he was enabled to read at a distance of sixteen inches with perfect ease, and without any fatigue to the eye whatever.

REMARKS.—The above detailed cases present several points of interest; and in part pretty clearly show the impropriety of the custom which many surgeons adhere to, that when a person has a fully developed cataract in one eye, and vision, or only partial vision, in the other one, to postpone the operation until the other is also dark. This custom is undoubtedly wrong, for it has been repeatedly observed, that if an eye affected with cataract becomes subject to an accidental inflammation, it is strongly disposed to become amaurotic; and further, the retina often loses its vigor by the permanent exclusion of light. It is further not unfrequent that in persons who have a predisposition to amaurosis, we find that if they are affected with cataract in one eye, that the other gradually becomes amaurotic, of which the above cases furnish evidence. In such cases the operation is imperatively demanded.

One of the chief objections urged against operating on only one eye is, that the focus of the one eye will differ from the other, and confusion of vision, or double vision will be the consequence. This, however, can be easily remedied by the use of carefully adjusted lenses. These are points well meriting the consideration of every scientific surgeon.—*Western Lancet, June*, 1856.

4. REMOVAL OF THE ENTIRE CLAVICLE; by *G. C. Blackman.* On the first of the present month (May), in consultation with his family physician, Dr. Wm. Wood, I saw Mr. J. B., *æt* 42, who had suffered from caries of the clavicle for more than a year. The first fistulous opening formed near the junction of the outer with the inner third of the bone, and just within this point it seemed excavated and expanded to a considerable extent. From its inferior margin there was a sharp ragged bony projection which proved to be a true exostosis. About an inch external to the sterno-clavicular articulation, there was a second fistulous opening through which a considerable quantity of matter was daily discharged. The adjacent integuments were of an unhealthy aspect, presenting every indication of extensive disease at the articulation.

Assisted by Drs. Wood, Gray, and my pupil, Mr. Jones, I proceeded at once to the removal of the bone. The patient having been brought under the influence of a mixture of chloroform and ether, I commenced my incision about the middle of the sternum, and carried it to the external fistulous opening. Great care was taken in isolating the bone from its important connections, and it was divided with a saw at the point above indicated, with the hope that the external third might be saved. On a more careful examination of the latter, however, it was found to be in an unsound condition, and was removed to its junction with the acromion. The inter-articular cartilage at the sterno-clavicular articulation was softened, and a considerable portion of it had disappeared. The internal third of the bone was disorganized beyond the power of reparation; or of removal unassisted by art. The operation being completed, a little lint was introduced, the integuments brought together and the whole neatly dressed by Dr. Wood, under whose skillful attention the patient was enabled in ten days to attend to his business. Three weeks have now elapsed since the operation, and not an unpleasant symptom has appeared; nor are there any indications of the extension of the malady to the sternum.—*Western Lancet, June*, 1856.

PRACTICAL MEDICINE.

1. TREATMENT OF SCARLATINA ANGINOSA. *Mr. Pye H. Chavasse, F. R. C. S.*, read before the Medico-Chirurgical Society of Birmingham, March 4th, 1856, the following paper on this disease:

As I have been very fortunate in my cases of scarlet fever, I consider it a duty to bring my treatment before the notice of the members of this Society.

My plan of late years, has been so uniformly successful (not having lost a case of scarlet fever for upwards of seven years), that I have not deemed it necessary to keep a record of cases. The system I adopt, in cases of scarlet fever, is to keep the bedroom cool—I may say cold—and to have a thorough ventilation through it; I therefore throw open the windows, be it winter or summer, and have the curtains and valances of the bed removed. If it be winter time, I allow the patient to have one blanket and a sheet; if it be summer time, a sheet only to cover him. If the throat be not seriously affected, I merely order a narrow strip of flannel once round the throat. If the tonsils be much enlarged, I apply a bran and oatmeal poultice to the throat, changing it night and morning. I prescribe an acidulated infusion of roses mixture, that is to say, infusion of roses with an excess of acid, made palatable with an additional quantity of syrup, to be given every three or four hours. This is the only medicine I give. When the child is old enough, I find roasted apples, mixed with raw sugar, very grateful to the patient.

Here let me pause, to advise my medical brethren always to make medicines for children pleasant. The administration of nauseous medcine to children oftentimes causes sickness, disgust and irritation, which frequently do more harm than the medicine does good.

But to return to our subject: I avoid purgatives in scarlet fever. I never, on any account, give a particle of opening medicine for the first ten days at least. It is my firm conviction, that the administration of purgatives in scarlet fever is a fruitful source of dropsy, disease and death. When we take into consideration the sympathy that there is between the skin and mucous membranes, I should think that we should pause before giving irritating medicines. The irritation of purgatives on the mucous membrane may cause the poison of the skin disease to be driven internally, to the kidneys, throat, pericardium, or brain. You may say, Do not purge if the bowels be not open for a week? I say emphatically, No.

Now with regard to food. If the infant be at the breast, keep him entirely to it. If he be weaned and under two years old, give him milk and water, and cold water to drink. If he be older, give him toast and water, and plain water from the pump, as much as he chooses; let it be quite cold—the colder the better. Weak black tea, or thin gruel, may be given, but caring nothing if he take nothing but cold water, unless he be an infant at the breast. Avoid broths and stimulants of every kind.

Now you must warily watch for the change of temperature of the skin. As long as the skin is hot, the above plan I steadily follow; but the moment the skin of the patient becomes cool. which it will do probably, in five or seven days, instantly close the windows, and immediately put more clothes on the bed. But still do not purge.

You will find the acidulated infusion of roses most grateful to the little patient; it will abate the fever, it will cleanse his tongue, it will clear his throat of mucus, it will, as soon as the fever is abated, give him an appetite. I believe, too, the acid treatment has some peculiar properties of neutralizing the scarlatina poison. I do not pretend to explain how, why, or wherefore.

When the appetite returns, you may consider the patient to be safe. The diet must be now gradually improved. Bread and butter, milk and water, and arrow-root, made with equal parts of milk and water, may be given for the first two or three days. Then a light batter or rice pudding may be added; and in a few days afterwards a little chicken or mutton-chop.

Within the last few years, I have had some fearful cases of scarlet fever; but, relying on this plan of treatment, I have given, even in very bad cases, a very favorable diagnosis. I have had cases where there have been violent headache and delirium; where there have been immense swellings of the parotid and submaxillary glands; where there have been enormous enlargement and ulceration of the tonsils; where a great portion of the fluid that has been taken by the mouth has escaped down the nostrils; where there has been a purulent discharge down the nose, which discharge has in many instances quite excoriated the skin over which it has traveled—and yet in such cases the patients have invariably recovered.

There is another important regulation I lay great stress upon. I never allow a scarlet fever patient, even if the attack be mild, to leave the house under a month in the summer, and then not if the wind be in the East or North-East; nor under six weeks in the winter. During the last seven years, I have never had anasarca from the scarlatina; and I attribute it entirely to the plan I have just recommended, and in not allowing my patients to leave the house under a month—until, in fact, the skin that has peeled off has been renewed. Dr. Watson, in his valuable lectures, gives some advice on this subject. From the sixteenth to the thirtieth day, I watch the case assiduously, to assure myself that there be no dropsical approach, carefully examining the urine, ascertaining that there be plenty of it, and that it be not albuminous.

Let me now sum up the plan I adopt:

1. Thorough ventilation, a cool room, and scant clothes on the bed, for the first five or seven days.

2. A change of temperature of skin to be carefully regarded. As soon as the skin is cool, closing the windows, and putting additional clothing on bed.

3. Infusion of roses with an excess of acid, sweetened, the only medicine to be given.

4. Purgatives to be religiously avoided for the first ten days at least, and even afterwards, unless there be absolute necessity.

5. Leeches, blisters, emetics, and cold and tepid spongings, are inadmissible in scarlet fever.

6. A strict antiphlogistic diet for the first week, during which time cold water to be given *ad libitum.*

7. The patient not to leave the house in the summer under a month; in the winter, not under six weeks.

My firm conviction is, that purgatives, emetics, and blisters, by depressing the patient, sometimes cause scarlatina anginosa to degenerate into scarlatina maligna; for although I have had numerous cases of scarlatina anginosa (my practice being much among children), and some of the cases very severe ones, I have never had, since I have adopted my present plan of treatment, one single case of scarlatina maligna. I have such faith in my present plan of treatment, that if it be duly followed out, I should seldom despair of even the worst cases recovering.

I am aware that some of our first authorities advocate a different plan from mine. They recommend purgatives, which I may say, in scarlet fever, are my dread and abhorrence. They advise cold and tepid spongings—a plan which I think dangerous, by driving the disease internally. Blisters, too, have been prescribed; these I consider weakening, injurious, and barberous, and likely to irritate the already inflamed skin. They recommend leeches to the throat, which, I am convinced, by depressing the patient, lessen his chance of battling against the disease, and increase the ulceration of the tonsils. Again, the patient has not too much blood: the blood is only poisoned. I look upon scarlet fever as a specific poison of the blood, which will be eliminated from the system, not by bleeding, not by purgatives, not by emetics, but by a constant supply of fresh and cool air, by the acid treatment, by cold water as a beverage, and for the first few days by a strict antiphlogistic diet.

Sydenham says, that scarlet fever is oftentimes "fatal through the officiousness of the doctor." I conscienciously believe that a truer remark was never made; and that, under a different system to the usual one adopted, scarlet fever would not be so much dreaded.

Let me urge my medical brethren to give my treatment a fair trial, and I am convinced that they will then add their testimony to mine that the plan is a good one. I have spoken out fearlessly and boldly; but I feel satisfied of the truth of my sentiments, and considering the immense importance of the subject, I could not be less emphatic.—*Asso. Med. Jour.—Charleston Med. Journal, May*, 1856.

2. NOTES ON TÆNIA, WITH FIFTY CASES TREATED WITH THE OIL OF MALE FERN; by *Dr. W. W. Gull.* This indigenous plant, the *Lastsæa Filix mas* of modern botanists, has been known as a vermifuge since the days of Dioscorides. About five-and-twenty years ago its efficacy was confirmed by Peschier, of Geneva, in several hundred cases; but it does not appear to have attracted much attention in this country until noticed by Dr. Christison, in the "Edinburgh Monthly Journal" for 1852. In the folllowing year a paper appeared by Dr. Christison in that journal, giving the results of his experience in upwards of twenty cases, in all of which, without exception, the worm was discharged after a single dose. Dr. Gull's cases amply confirm the previous statements of Pescheir and Dr. Christison, and show that an indigenous weed equals, if it does not surpass in efficacy as a vermifuge, the vaunted kousso of Abyssinia, the turpentine of America, or the pomegranate of the Continent. The preparation employed was the ethereal tincture of the rhizome, in doses of from one and a half to two drachms,* in a mucilaginous draught, occasionally followed by a saline laxative; which last, however, Dr. Gull does not consider necessary. In all of Dr. Gull's 50 cases, as well as in many others treated by his colleagues, the remedy proved effectual. One patient had been laboring under tapeworm for eleven years, and had taken kousso six times. In 25, or one half of the cases, we find the period mentioned which intervened between the administration of the drug and the expulsion of the worm. The average of all the cases was five hours and three-fifths. In 8 out of 20 cases the head of the worm was found. There can be no doubt, then, of the efficacy of the male fern as an anthelmintic; but we still want information as regards the permanence of the cure which it effects. In 5 only of Dr. Gull's cases are we informed that

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*The dose appears large. In Dr. Christison's cases it did not exceed twenty-four grains.

the cure was permanent, whereas in 6 cases we are told that the worm returned within a short period.

With regard to the locality in which the patients lived, all came from the low-lying districts, on the south bank of the Thames. As to sex, 27 were females, 14 males, and 9 doubtful, but probably females; this would make 36 females to 14 males. As to age, 11 were under ten years, 6 from ten to twenty, 14 from twenty to thirty 11 from thirty to forty, and 8 above forty.—*Guy's Hosp. Reports*, 1856.—*Medico-Chir. Review, April*, 1856.

3. ON THE ABSORBING POWER OF THE INTESTINES IN THE ALGID STAGE OF CHOLERA. By *Dr. A. Hirsch, of Dantzic.* Translated by W. Krause, M. D.—Duchaussey, as many others, found by experiments on the external skin, that its absorbing power is entirely lost during the latter stage of cholera. He applied sinapisms in a number of cases, which did not redden the skin, though left upon it above an hour. The skin felt cool and clammy, and was never seen to become hot and reddened. A slight rubefaction became perceptible, after the skin had got warm, and persisted even when the skin became again cool. Vesicants did not produce blisters even in a single instance; the skin appeared either normal under the plaster, or somewhat softened. Huebbenet evinced the loss of absorbing power of the intestinal membranes, by chemical researches. He administered the ferro-cyanate of potassa per os, and never succeeded in detecting a particle of it after death, in the blood of the patient. A similar series of examinations made at the city hospital of Dantzic, during the epidemics of 1853, led to the same conclusion. D. followed another method, which, though less reliable, yet is worthy of noticing. He closely watched the effects produced upon his patients by active drugs, such as quinine, iodine, belladonna, and nitrate of strychnia. He declares, however, the results of his observations uncertain with regard to quinine, though it seems remarkable that a patient who took one hundred grains of quinine per os and anum, within forty-eight hours, did not perceive the least sign of its action during the algid stage. After, however, reaction had come up, and the urine was again being secreted, the characteristic symptoms, especially buzzing in the ears, made their appearance. As to the loss of absorbing power of the external skin, the following experiment appears highly interesting: The back part of the forearm of a patient suffering with cholera, was painted over with tincture of iodine, the volar side of the same arm with a solution of starch. Now, a strong current of electricty being directed to pass through this arm for ten minutes, not the least sign of the usual change in the color of the amylum could be observed. It seems further to deserve notice

that the skin of the arm did not turn red, and the commotions of the muscles were out of proportion to the strength of the battery used. Belladonna was administered in all possible forms and ways, without any symptom of its physiological action. It is an interesting fact, which D. mentions on this occasion, that the pupils of a patient near dying, into whose veins a solution of extract of belladonna had been injected, dilated to their widest extent within three minutes. D. regards the occurrence as an important therapeutical hint to the practitioner; inasmuch as the usual ways for therapeutical agents, intestines and skin, being blocked up in cholera, there is another passage left, the circulatory apparatus, which seems to favor the speedy action of our remedies. The same negative results, as before, were obtained also with the nitrate of strychnia. It was administered through the mouth, rectum, and subcutaneous cellular tissue. D. was bold enough to exhibit one and a half grains of strychnia in a single dose.

He condenses the results of his investigations in the following propositions:

1. Patients in the algid stage of cholera have lost the power of absorption, no matter whether the medicament be administered through the mouth, rectum, bladder, skin, or cellular tissue. (D. did not examine if the same applies to the mucous membrane of the lungs.)
2. The absorbing power is restored again in moderate cases in the state of reaction; in very grave cases, not before the discharges are entirely arrested, urine is secreted again, and reaction fully established.
3. If the patient remains comatose, although the skin has become warm, and the pulse can be felt, absorption, as in the algid state, is found wanting.
4. Should, however, some absorption be observable (?), then it is so trifling, that no cure can be expected from the usual exhibitions of medicines.
5. It seems, therefore, quite useless, and sometimes even dangerous, to trouble the patient with active medication, especially since the doses, usually being increased, accumulated effects might be brought about, when the system begins to react.
6. If any internal remedy is to be tried in the latter stage of cholera, it must be given through the veins. D. had sufficient opportunities to convince himself of the favorable results of such a treatment.

We shall mention hereafter some doubts which have justly been advanced against the conclusions drawn from the above observations, although it may be looked upon as a fact, that the skin and mucous membranes are deprived of their absorbing power during the algid stage of cholera.

It may perhaps not be improper to mention, in addition to the loss of absorption, some facts which serve to prove the loss of reflex action, after collapse has taken place. Buhl states that the muscles of the face do not contract when the face is sprinkled with cold water. The sphincter ani does not contract upon the introduction of a finger into the rectum; neither sneezing nor coughing can be produced by the appropriate stimuli. As regards, however, the non-striated muscles, which are accessible to observation, the iris was seen in a state of moderate spasm, the pupil somewhat contracted, and sluggishly reacting upon light. Hutchison, of Brooklyn, who made the same observation, pronounces this phenomenon a very unfavorable symptom. Pfeufer once applied atropia to the eye of a patient, whereupon the pupil dilated to its ciliary margin, and remained so for some time after the patient was dead.

Another doubt with respect to treatment arises from the consideration that there is no absorbing power of the intestinal mucous membranes. Is, under such circumstances, any result to be expected from treatment?

Brochin (*Gaz. des Hôp.* 112, 1854), answers this question in the affirmative. For there are not only other passages for the administration of physic than the stomach and intestines, but we are neither able yet to determine whether and when the absorbing power is entirely gone, nor if medicaments, without being absorbed, might not produce a desired effect by local action. The number of remedies, applicable to the last stage of cholera, is however much to be limited, a view fully agreed with by Vernois in whose clinics Duchaussoy made his observations. (*Gaz des Hôp.* 115, 1854). Also, the advice of Sée, to be careful in the repeated exhibition of large and increased doses during the asphyxic stage, ought not to be neglected, as very serious consequences may follow, when the system begins to react. Sée himself witnessed a case, in which the patient became narcotized during reaction, many hours after the last dose of opium had been given. Gietl finally draws our attention to the fact, that liquids which have been exuded into the intestines, are absorbed again during reaction. For the bowels are found to be empty, though the patient had no more operations by which the liquid contents of the bowels, previously ascertained by physica examination, could have been discharged.—*Cin. Med. Observer, May.*

PART FOURTH.

Medical Intelligence.

American Medical Association. Third Annual Meeting, held at Detroit, Michigan, May 6th, 1856.

A very large representation of the profession, from various and distant parts of the country, having assembled in Fireman's Hall, at the appointed hour, Professor Geo. P. Wood, of Philadelphia, called the meeting to order as President, and Dr. Wm. Brodie, of Detroit, took his seat as Secretary.

The delegates having been welcomed to Detroit, in appropriate terms by Dr. Pitcher, on motion of Dr. Thompson of Delaware, the Committee on Nomination for officers was chosen, consisting of one from each State, selected by their respective delegation.

The hours for each session having been arranged during the absence of the Committee, and sundry unimportant business having been disposed of, the death of Dr. John C. Warren of Boston, was announced, which created a profound sensation, Dr W. having been one of the early Presidents of the Association. A fitting tribute to the exalted character of the deceased was spontaneously made by Dr. Childs, of Massachusetts, and Dr. Gross of Kentucky, and these two gentlemen, with Dr. Wood, of New York, Dr. Pitcher of Michigan, and Dr. Geddings, of South Carolina, were appointed to prepare resolutions of veneration and respect for the deceased, to be submitted to the Association.

The Committee on Nominations reported the following list of officers for the ensuing year, viz:

For President, Dr. ZINA PITCHER, of Detroit.

For Vice-Presidents, Dr. T. W. BLATCHFORD, of New York; Dr. W. K. BOWLING, of Tennessee; Dr. E. GEDDINGS, of South Carolina; Dr. W. H. BRISBANE, of Wisconsin.

For Secretaries, Dr. WM. BRODIE, of Michigan; Dr. R. C. FOSTER, of Tennessee.

All of which nominations were confirmed, and the City of Nashville, Tennessee, was then fixed upon for the next meeting of the Association.

The retiring President, Dr. Geo. B. Wood, then delivered his Annual Address, which was well received.

A Committee having conducted the new President, Dr. Pitcher, to the chair, he delivered a brief inaugural address.

On motion of Dr. Gunn, of Michigan, the resolution requiring a majority of the Publishing Committee to be residents of the place where the meeting is held, was repealed.

The Committee on Prize Essays and Volunteer Communications report that only four have been received, and though all these are highly meritorious, they have only awarded one prize, to the one bearing the motto "Una est veritas," on the "Arterial Circulation," which they very highly commend. On opening the accompanying envelope, the name of Dr. Henry Hartshorne, of Philadelphia, was announced as the author.

Dr. Blatchford, from the Committee on Hydrophobia, &c., made a report, with statistics, which latter, on motion, were ordered to be transmitted to the Governor of each State, in the hope of prompting enlightened legislation on the subject.

The Committee on Publication made an elaborate report relative to the Transactions, complete copies of which can no longer be furnished, the number of sets on hand being reduced to seven, five of which were ordered to be retained among the archives.

The Treasurer's report showed a favorable state of the finances.

Dr. McNulty, of New York, made an unsuccessful attempt to appoint a committee to prepare an address to the public, bespeaking their "respect, gratitude, and confidence" for the medical profession. An amendment was proposed by Dr. Kittredge, that every member of the Association "should take the stump" for the same purpose. The members seemed to think that they and the profession had the respect, gratitude, and confidence of the community already, to the extent of their individual merits, and the motion was withdrawn.

Dr. James B. Wood was invited to exhibit to the Association the jaw bone recently extirpated by him in a surgical operation, reported to be an extraordinary case. Dr. W. promised to lay it on the President's table.

Sundry Committees asked and received a continuance on the subjects committed to them, not being ready to report.

A large number of visitors were made members by invitation.

The afternoon of the 7th, a steamboat excursion for the delegates had been provided, and the evening was occupied in enjoying the hospitality of medical men and other citizens of Detroit, which was liberally tendered.

On the next morning business was resumed, and on motion of Dr. Atlee of Pa., *Resolved,* That the President shall be authorized annually to appoint delegates to represent this Association at the meetings of the British Association, the American Medical Society of Paris, and such other scientific bodies in Europe as may be affiliated with us. Adopted.

Dr. Clendennin offered the following:

Resolved, That a Committee of one be appointed for a period of three years, with instructions to report progress at each annual meeting of the Society, to investigate the etiology and pathology of epidemic cholera, and that said committee be allowed to add any other members to the same which they may think necessary to further the objects of the appointment.

On motion of Dr. Mendenhall, of Ohio, the name of C. H. CLEVELAND, and on motion of Dr. Atlee, of Pa., the name of DR. JAMES McCLINTOCK, *were expunged from the list of permanent members of the Society,* on the ground that they had apostatized from the regular into the "irregular" practice. An invitation was extended to the medical profession of Canada to meet with their body at Nashville.

Dr. Phelps, from a Special Committee, submitted resolutions relative to the death of Dr. Gooch, during the pestilence at Norfolk.

Dr. Gross, of Ky., from a Committee appointed the day previous, reported resolutions relative to the death of Dr. J. C. Warren, of Boston. Adopted.

Dr. Gross, of Kentucky, read a report on "The Causes which Impede the Progress of American Medical Literature." In conclusion, he submitted the following resolutions:

Resolved, That this Association earnestly and respectfully recommends: 1. The universal adoption, whenever practicable, by our schools, of American works as text-books for their pupils. 2. The discontinuance of the practice of editing foreign writings. 3. A more independent course of the medical periodical press towards foreign productions, and a more liberal one towards American; and, 4. A better and more efficient employment of the facts which are continually furnished by our public institutions, for the elucidation of the nature of diseases and accidents, and, indirectly, for the formation of an original, a vigorous, and an independent national medical literature.

Resolved, That we venerate the writings of the great medical men, past and present, of our country, and that we consider them as an important element of our national medical literature.

Resolved, That we shall always hail with pleasure any useful or valuable work emanating from the European press, and that we shall always extend to them a cordial welcome, as books of reference, to acquaint us with the progress of legitimate medicine abroad, and to enlighten us in regard to any new facts of which they may be the repositories.

Dr. Phelps, of New York, moved that the report and resolutions, as a whole, be adopted.

At the suggestion of a member, the question was divided. The report was adopted.

Upon the reading of the first resolution, a member proposed to substitute "just," for "liberal." Dr. Gross accepted the amendment.

Dr. Palmer, of Ill., wished to understand the meaning of the word "practicable," as employed in the first resolution. If it meant that an inferior work by an American author was to be used in our medical schools, in preference to a superior one, treating of the same subject, by a foreign author, he was decidedly opposed to the resolution. If, when the American work is equal or superior to the foreign one, it is to be used, then he had no objection. He alluded to works by eminent English and French authors.

Dr. Gross explained. One of the works alluded to by Dr. P. must of necessity be used in our medical institutions of learning, as there is no work by an American author on the same subject. Foreign works should be used as books of reference, and American books, "when practicable," as text-books.

The report on medical literature, by Dr. Breckinridge, of Ky., was subsequently read and referred to the Committee on Publication, as was also that of Dr. Gross, though said to be marked by a contrariety of views.

Dr. Hamilton; of Buffalo, obtained leave to publish his report to the Association, on Deformities after Fractures, in his forthcoming work on Fractures and Dislocations.

Dr. Davis of Illinois, reported on the "changes in the composition and properties of the milk of the human female produced by menstruation and pregnancy," and was requested to continue his investigations. This report, and that of Dr. Newman, of Buffalo, on the "Sanitary Police of Cities," will doubtless appear in the Transactions, which they both merit on account of their ability and importance.

Dr. Fuller, of Maine, made a report on "the Best Treatment of Cholera Infantum," which stated that the pathology of the disease was little understood, and recommended that physicians should freely interchange opinions on the subject.

Dr. Green, of New York, read a report on the "Use and Effects of the Application of Nitrate of Silver to the Throat," in which he asserted that great benefits had been derived from topical medication in thoracic diseases, tuberculosis, bronchitis, &c., &c. Referred to Committee on Publication.

Dr. Flint, of Ky., Chairman of the Committee on "The Best Mode of Rendering the Medical Patronage of the National Government Tributary to the Honor and Improvement of the Profession," made a report. He denounced the granting of patents by the United States Government to "quack medicines," but stated, however, that it appears from a letter written by the present Commissioner of Patents, that the practice of the office has been to discourage such a use of its functions, and that during the past fifteen years but four or five such patents have been granted; though from twenty to thirty applications per year had been made therefor. The credit of sanitary improvements, the Dr. said, were not due to individuals, but to medical science.

Several reports from standing committees, including "Medical Education," "Medical Topography and Epidemics of the Eastern Shore of Maryland," "Epidemics of Yellow Fever in Charleston, 1854," "Topography and Epidemics of Louisiana," and several voluntary communications, were announced and referred to the Committee on Publication.

A member of the Committee on a Uniform System of Registration of Marriages, Births, and Deaths stated that they were unable to make a full report at present, in consequence of the death of their Chairman, Dr. Wilson of Connecticut.

A partial report was submitted and referred to the Committee on Publication.

Dr. Gunn, from the Committee on Arrangements, reported that he had three voluntary communications, and requested that they may be referred to a Special Committee, as they have not the time possibly to examine them preparatory to referring them to the Convention and the Committee on Publication, or rejecting them.

Dr. Watson of New York hoped that the Committee on Arrangements would not be excused. There was complaint made last year, by Dr. Corson, of New York, that last year's committee had treated a paper which he then sent in with disrespect, and refused its admission into the Transactions. He complained bitterly of his treatment in the matter.

Dr. Davis, of Illinois, Chairman of the last year's committee, replied, stating *Dr. Corson had no reason to complain*, and that his allegations were *unfounded.* The committee who conferred with Dr. C. had assured him that he *must revise his paper*, and he had expressed a willingness to do so. The Dr. *never had done this*, and his paper consequently never appeared.

The communications were referred to a special committee, consisting of Drs. Stillé, of Philadelphia, S. Jackson, of Northumberland, Pa. and J. B. Biddle, of Philadelphia.

Dr. Dorsey, of Ohio, offered a resolution that the Committee on the Etiology and Pathology of Cholera be instructed to memorialize the Congress of the United States, requesting that honorable body to grant every necessary assistance which can or will promote the objects for which the committee has been appointed. Carried.

Dr. Wistar, of Pennsylvania, offered a resolution that a committee of three be appointed to correspond with the proper officer of the Smithsonian Institute, inquiring into the possibility of procuring a chamber in that Institution for the use of the Association. Carried; and Drs. Wistar of Pennsylvania, Hale, of Washington, and J. Neill, of Pennsylvania, appointed such committee.

Dr. Neill of Philadelphia, offered a resolution that no medical preparation, account of surgical operation, or anything else designed or calculated to give notoriety to an individual, be laid before the Association until reported upon by a special committee.

Dr. Jas. R. Wood, of New York, mounted the platform, and said he presumed the resolution was aimed at him, because he had laid before the members of the Association a jawbone, taken from a living subject, having the phosphorous disease. This was a very rare and interesting case, and he brought it before the Association as such, that they might have the benefit of all he knew in relation to the matter. Besides, he had not done this without first consulting some of the oldest members of the Association, and receiving their approbation of the proposed step. He did not seek notoriety. Motives of vanity never entered into his thought, and if any man could point to one single act of his life that was unmanly or unprofessional, he would forfeit all claims to the respect and esteem of his brethren without a murmur. He felt wounded at this resolution. He had been told that such a resolution was to be presented by a gentleman of Philadelphia. Dr. Neill was a stranger to him. He had never met him, and he was at a loss to account for the *animus* of the move. [Applause.]

Dr. Neill, in reply, disclaimed any intention of making his resolution personal. It embodied a principle, however, which he thought the association ought to consider. If any man, who thought he had removed a good sized tumor or relieved an uncommonly difficult case of disease, should take it into his head to bring the matter before the Association, he could perceive that it would very soon become embarrassed, and the privilege which, in extraordinary cases were allowable and proper, would be abused. [Applause.]

Dr. Wood replied: He would not have thought much of the resolution, perhaps, had not he been told beforehand that his jaw was to be overhauled. Threats had been thrown out to him of this sort; when they took the form of a resolution, it was not to be wondered at that he should deem it personal. He desired that the motion of Dr. Gross, of Ky,, inviting the association to examine his [Dr. W's] surgical specimen should be stricken from the minutes.

Dr. Thompson, of Delaware, said that when New York and Pennsylvania got into a quarrel, Delaware would 'very naturally come in between. He hoped that New York would hold her jaw, and Philadelphia not stick in hers. He trusted that Dr. Neill would withdraw his resolution, and that Dr. Gross's motion would be stricken from the minutes.

Dr. Gross moved to strike his previous motion from the minutes, for the purpose, he said, of removing the *bone* of contention.

The resolution was withdrawn and the motlon stricken from the minutes. Subsequently Drs. Wood and Neill were introduced to each other by Dr. Gross, who put his arm about the neck of both and drew them together, and with sundry shakes of the head, administered some parental counsel, which his age, ability, and experience undoubtedly fitted him to give.

After some complimentary resolutions, the Association adjourned, to meet in Nashville, Tenn., in 1857. The Association has been emphatically a working body of intelligent men, and therefore my report, to reduce it to any reasonable limits, is only a synopsis of the more important transactions.—*Condensed from the American Med. Gazette.*

EDITOR'S TABLE.

CLINICAL INSTRUCTION. — The marked improvement which is seen in the medical teaching of the present time, is manifested, perhaps most strikingly, in the rapidly increasing importance which our medical schools attach to clinical instruction. But a few years since, and no inconsiderable number of graduates in medicine were annually commissioned by our numerous colleges, as qualified for the responsible duties of the profession, who had never been within the walls of a hospital. They had, as their education in practical medicine, separate from the other departments, read Eberle, Watson, and other accredited text books, and had listened to lectures upon Theory and Practice *illustrated* with plates, and occasionally with morbid specimens preserved in alcohol, but so altered in texture and color, as hardly to be recognized even by a skilled pathologist. This, in some cases, constituted the entire preparation of the young physician in the department of practical medicine. Others enjoyed, in addition to these meagre means of instruction, such experience as might be derived from occasional and irregular opportunities of observing the practice of the preceptors, with whom they passed the period of their pupilage. But within a few years, there has been a growing feeling with the profession, that something far beyond this is necessary, as a preparation for the practical duties of professional life. We would not wish to be understood as underrating the knowledge obtained by the student in visiting the patients of his private instructor. On the contrary, if this mode of instruction could be sufficiently complete and methodical, little else would be desired. But the great objection to relying upon it as a means of clinical teaching, or at least, as the only means, arises from its necessarily imperfect and limited nature. We are confident that the experience of others will conform to our opinion, that there are but few instances, where a complete, systematic, and methodical training is obtained in this way. No matter how thoroughly educated the preceptor may be, or how well qualified he may be to teach, it is very rarely the case that he possesses the time or the inclination for such labor. The fatiguing duties of his calling generally render it necessary that his visits should be hurried, and from this cause alone, he would not be able to explain to his pupil the pathology of a case of disease, its relation to the symptoms, the diagnosis, and the reasons for his prescriptions. Even if he has the time, his mind is ordinarily too much engrossed by his cares and responsibilities to allow him the patience for a well digested clinical lecture. Teaching is not his vocation, and he is more inclined to shun than to seek this extraneous service.

A comparatively modern invention, intended to remedy to some extent, the defect alluded to, has become almost an essential part of the curriculum of most of our schools of medicine. I refer to what are called *College Cliniques.* These, as is generally known, consist of the appropriation of more or less time each week, to the investigation and treatment of cases of disease and injury, which are brought before the class in one of the college lecture-rooms. The professor selects from the array before him, such patients as he deems best adapted for his purpose, investigates their diseases, indicates the treatment, or performs operations if they be required. At the same time, a lecture, more or less elaborate, enforces the leading principles and more important facts pertaining to each case. All this, in presence of the assembled class, is sure to awaken not a little interest, and is doubtless possessed of no inconsiderable value. This is especially true in surgical cases, and more particularly in those demanding operative interference; and we are confident, from our own observation, that surgical teaching has been much benefitted by this new mode of practical illustration. But it may well be doubted whether in medicine, so called in contradistinction from surgery, like beneficial results have followed this novel procedure. "Medical cliniques," must of necessity be very inferior to the surgical. The number and variety of the cases must be limited. Chronic diseases, or acute cases of a trifling nature can alone form the subjects of the clinique, and even in these the opportunity for observations is likely to be limited and irregular. The patients are not apt to return to the clinique sufficiently often to enable the student to watch their progress, and observe their termination. The graver forms of acute disease are never seen, and post mortem observations are out of the question.

Whatever may be thought to be the value of these medical cliniques, it is quite obvious that they never can come up to the full requirements of a practical education in clinical medicine. We believe that in a hospital alone, can these requirements be really met; that here alone, can be found the true elements, together with the surrounding favorable circumstances, upon which true clinical instruction can properly be based. It is only in a well regulated hospital, in a city large enough to fill its beds, that we can find the number and variety of cases of disease necessary for the illustration of the wide field of practical medicine, and we are confident that in such institutions alone, can the student attain that practical knowledge of pathology and therapeutics, which will enable him, at the onset of his professional career, to meet properly the grave responsibilities before him. It is here only, that the student can observe without obstruction the whole course of a disease, from its beginning to its end, that he can watch the effects of different modes of treatment, and note the result where remedial measures have been employed. This is also eminently the only proper field for the systematic study of pathological anatomy. The comparatively infrequent and almost always hurried opportunities afforded in private practice for studying the changes produced by disease are but sorry substitutes for the facilities furnished in a hospital dead-house, or even in the amphitheatre, when the autopsy is conducted before an assembled class, and the necessary time is devoted to an exhibition and explanations of the diseased organs.

One of the best modern writers, Latham, says, 'and you must go to the wards of a hospital, in order to learn disease and its treatment; for there only, you can see the sick man and inquire his symptoms, and give the remedy, and note its effects, and witness its success or its failure. In the wards of this vast hospital, there are five hundred experiments continually going on, day and night; even the great experiments of appeasing pain, of repairing injuries, of controlling disease, of averting death. They are under the direction of us, the physicians and surgeons.' The wards of a hospital undoubtedly furnish the best means of clinical instruction which exist or can ever be hoped for, or perhaps even desired. Where a few students can follow an accomplished practitioner and teacher, in his daily rounds from bed to bed, observing his examinations, and listening to his familiar teachings and at the same time under his direction investigating cases for themselves, making the diagnosis, and indicating the treatment, they must, beyond all doubt, enjoy the best possible advantages for the acquisition of practical knowledge of disease. This plan, so excellent in all respects, can only be pursued where the number of students is limited, as but few can come in close proximity with the patient; neither for obvious reasons can a class be introduced among the rows of beds which crowd a hospital ward. For these reasons, it has become necessary to adopt a different mode of instruction, where a considerable number of students is to be taught, a mode wanting some of the advantages which are so eminently enjoyed by the ten or fifteen pupils who can gather about the bed. The plan to which we refer, and which is now very generally adopted, consists in the introduction of the patients before the class in the hospital amphitheatre; and where, as is usually the case, the lecture room is on a level with the principal wards, cases of severe disease can readily be brought, either on a bed or lounge, without detriment, before the assembled students. These cases are examined, diagnosticated, and prescribed for in the presence of the class, with usually some account of the pathological condition constituting the disease. An hour or two thus occupied with such a number of cases as may be advantageously used, constitutes what is now commonly called a clinical lecture. That this course of instruction is not as perfect as where a small body of pupils can be brought in direct contact with each patient, is unquestionable. But that it possesses great advantages, no one will deny, who has ever enjoyed the opportunity of such instruction; and we can not but think, that those who decry this kind of clinical teaching, are either ignorant of its method and results, or are governed by the unworthy motives which sometimes lead men to depreciate that which is beyond their own reach. Every one who has ever attended such a clinical lecture cannot fail to have been struck with the marked interest evinced by the class. The veriest idlers, who in the college lecture-room think more of their ease than the professor's teaching, when in the hospital amphitheatre, are all attention. The interest evinced by the pupils for the instruction received in the hospital clinic results in a much more lasting impression upon their minds, than any which can be made by the most striking didactic lecture in the college, or by the best written text book. But the great and important feature of these hospital clinics, consists in bringing the patient directly before the class, thus enabling the student to learn practically, the modes of investigating disease, to observe the general appearance of the sick in each particular malady, and study their individual symptoms, and be instructed in the appropriate treatment. If there was no other advantage to be derived, except the instruction of the class in the manner of examining patients, the time would be well spent; for the investigation of a case of disease frequently requires no inconsiderable amount of wisdom and learning, and the mode of conducting such investigations can be as fully and as practically taught to the hundreds who may be assembled in the amphitheatre, as to the few who gathar about the bed in the ward. That the symptoms can not *all* be seen and appreciated by the pupils, in their seats, is true, and herein lies the disadvantage under which this mode of clinical teaching must labor. Still, this is by no means so great as those who are not familiar with this method of instruction might snppose. Take a case for illustration. A patient is brought into the area of the amphitheatre, evidently suffering from grave disease. His pallid face, with its expression of anxiety and distress, together with, perhaps, a respiration oppressed and laboring, at once fix the attention. The professor commences his examination, and finds that the case is one of considerable duration; the patient may have been the victim of disease for several months, and may gradually have reached his present condition of imminent danger. All the important facts pertaining to his past history are brought out in order, and clearly presented. The examination of his present condition is commenced, and he is found to be suffering from a large accumulation of fluid in the areolar tissue, and in the great cavities of the trunk. The limbs are much distended, so is the abdomen. The glistening skin is readily seen, and the deep pits left when pressed upon by the finger, are distinctly apparent. In fine, he has general dropsy. This explains the embarrassment of respiration and the general disquietude and suffering of the patient. The cause of this dropsical accumulation is next to be sought. The heart is examined, and the professor assures his pupils that it is free from disease. True, but few can have the opportunity of listening to its sounds. Then a portisn of the urine is obtained and inspected; as at first seen, it presents no unusual appearances. A part of it is placed in a glass flask, is held over the flame of a candle, when it exhibits a striking change. As it boils, it becomes cloudy, an abundant white precipitate being formed, which shows the presence of albumen. To make the case still stronger, into another portion of the urine a few drops of nitric acid are poured, when the same change is noticed. The case is now fully made out, the patient is suffering from Bright's albuminuria, producing general dropsy. Thus all the essential features of the case are fully, and we may add, clinically taught to the entire class. This is but a single illustration of what is true of a large number of diseases, and in fact, there is no case, from the gravest form of fever or inflammation, to the most trifling malady demanding medical aid, which can not be made subservient for clinical instruction, to an extent which can hardly be appreciated by those who are not familiar with the hospital amphitheatre. So important and so essential do we regard this part of a medical education, that we do not hesitate to express the confident opinion, that the time is not far distant, when no medical college can sustain any considerable prosperity, which has not at its command a large and well appointed hospital.

Alexis St. Martin, made famous several years ago by the well-known experiments of Dr. Beaumont, paid this city a visit a few days since, Barnumized by Dr. G. T. Bunting, and an opportunity was given to such of the profession and citizens who are curious in such matters, to see the opening through which Dr. Beaumont so often looked into the stomach, and through which the professional public have ever since looked at Dr. Beaumont. St. Martin is yet only fifty-three years of age, possesses, apparently, a vigorous constitution, and is said to enjoy almost uninterrupted good health. He has been living since he left Dr. Beaumont—now more than twenty years ago—in a little village, thirty or forty miles from Montreal, where he was found by Dr. Bunting, and after much persuasion and various douceurs, amounting in value to the enormous sum of thirty-five dollars, consented to place himself in the hands of Dr. Bunting for the purpose of exhibition and experiment. What the precise object of Dr. Bunting, in taking him around the country, stopping only a day or two in each city, we confess we do not understand. It is true that we were told that it was for scientific purposes, and more particularly that the profession generally might witness Dr. Bunting's experiments, the results of many of which are said to be contradictory to those made by Dr. Beaumont; but if called into the jury box to-day, all that we could swear to would be, that we saw a fistulous opening in St. Martin's left side, about an inch in diameter, said to communicate with the stomach, that we saw Dr. Bunting pass into this opening what he said was a thermometer, and subsequently saw him extract some turbid fluid, said to be ingesta, by means of a glass tube. As to what we heard, we doubt whether it would appear to the Doctor's credit to have us tell, but as he distinctly asserted that his objects were purely scientific, we hope he will take it kindly of us to suggest to him that he needs a little rubbing up in his chemistry. A man that does not know the identity of muriatic and hydrochloric acid, is hardly prepared, in our judgment, to conduct a series of severe experiments on the composition of the gastric fluid, and its action on vegetable and animal substances. That he undoubtedly manifested such ignorance—making all allowances for slips of the tongue—all who were present can bear witness.

In a complimentary notice of our Review, which appeared in the American Medical Gazette, edited by our much-esteemed friend, J. Meredith Reese, of New York, the writer states that Dr. Bozeman, the author of the article entitled "Vesico-Vaginal Fistule," which appeared in the first number of the Review, is in error as to his statement that Dr. Sims' method fails in nearly half the cases operated upon, and adds that Dr. Sims has cured thirty cases—all that he has operated upon—since he (Dr. Sims) has been in New York. We are inclined to think that the writer did not read the article in question very carefully, for Dr. Bozeman states explicitly that, although he has no statistics to guide him, he has reason to believe that one half the *operations* by Dr. Sims' method are unsuccessful, and not that one half the *cases* fail to be cured. If Dr. Sims will tell us how many times he operated upon the thirty cases he is said to have cured since his residence in New York, we can then make a comparison of the two methods.

We may add here, that since the publication of the article of Dr. Bozeman, this gentleman has performed three more operations with the button-suture upon three separate cases—one of them even a more remarkable one than some of those detailed before — all proving entirely successful. Dr. Bozeman has now operated ten times with the button-suture without a single failure.

In answer to an assertion made by one of our exchanges that the button-suture is only a very slight modification of the clamp-suture, all that we have to say is that the proper mode of judging of the value of a new operation, whether it be called only a modification of some pre-existing plan or not, is by its results. Dr. Sims' suture is clearly a very slight improvement upon the old quilled-suture, but Dr. Sims deserves none the less credit on this account, if his method is successful in one half the cases to which it has been applied, all other methods having previously failed nearly nine times out of every ten.

The junior editor of this journal is alone responsible for the editorial contained in the first number, upon which the editors of the Boston Medical and Surgical Journal have, not unaturally, seen fit to make some animadversion. But we can not for the life of us see what the favorable notice of our senior's works, by the British press, could have to do with his opinion concerning the well-known proclivities, in manners, customs, and thought, of the higher class of Bostonians generally.

CHANGES IN MEDICAL SCHOOLS. The last month has been unusually prolific in resignations and appointments in our medical schools. Of these Louisville has, apparently, had more than her share.

Dr. Austin Flint has resigned the Chair of Medicine, which he had occupied with so much ability for four years in the University of Louisville, and has accepted the professorship of Clinical Medicine and Pathology in the University of Buffalo, of which he was one of the founders, and for several years one of the chief ornaments. The chair vacated by Dr. Flint has been filled by the transfer of Professor Rogers; and the Chair of Materia Medica is now occupied by Dr. Robert J. Breckinridge. Dr. T. G. Richardson has resigned the Demonstratorship of Anatomy, and Dr. Archie Cook, late Professor of Anatomy in the Kentucky School of Medicine, has been called to the vacant post. The senior editor of this journal has also resigned his chair in the University.

The Kentucky School of Medicine has lost, by resignation, Dr. Lawson, Dr. Breckinridge, and Dr.

Cook, and gained Dr. T. S. Bell and Dr. —. Marshall, of this city. Dr. Ackley has resigned the Chair of Surgery in the Cleveland Medical College.—— Dr. Edward M. Moore, of Rochester, has been appointed Professor of Surgical Anatomy and Surgical Pathology in the University of Buffalo.——The Jefferson Medical College, of Philadelphia, has lost the services of Professor Mütter, who retires on account of ill health, after a brilliant and useful career of fifteen years. The vacancy thus created has been filled by the appointment of the senior editor of the Review, a graduate of the school. Dr. Mütter has been elected Emeritus-Professor of Surgery in the College. We understand that it is his intention, at an early day, to visit Europe and the East for the benefit of his health. He will carry with him the best wishes of the whole profession of the country, for his speedy restoration.

PERSONAL.—The senior editor of this journal will continue the practice of medicine and surgery in Louisville, until the first of October. His relations with the Review will, for the present, remain unchanged.

NECROLOGICAL NOTICES.

WITHIN the past few weeks Surgery has lost some of its brightest ornaments. John C. Warren, Geo. J. Guthrie, P. N. Gerdy, and A. Vidal, (de Cassis,) are numbered with the illustrious dead! Warren and Guthrie had reached the allotted time for man; but Gerdy and Vidal were still active laborers in the field. Like Lisfranc, Bourgery, Berard, and Roux, the monument which Gerdy had prepared to erect to his own memory—his *Chiurgie Pratique Complete*, in seven volumes — was left unfinished. But three of these, we believe, have as yet appeared, and each bears the impress of his peculiar mind, and each is sufficient to show that he was a man of no ordinary powers. Vidal at the age of fifty-three has fallen a victim to a renal affection, from which he has long suffered; but unlike those of his countrymen already mentioned, his labors were completed. We had but just risen from the study of the fourth edition of his comprehensive *Traité de Pathologié*, &c., in five volumes, (1855,) and the second edition of his celebrated work on *Maladies Veneriennes*, bearing the same date, when we found in the *Archives Generales*, for May, 1856, the notice of his death. Of his great work on Surgery, we may say that the very fact of a fourth edition being so soon demanded, corroborates the remarks pronounced over his tomb by Velpeau, viz., "*Son traité pathologié externe, est un monument durable qui honorera longtemps la chirurgie francaise.*" Of his treatise on venereal affections, which displays much originality, with Velpeau we would say: "*Vidal aura le grand honneur d'avoir démontré la transmissibilité des accidents secondaires de la verole, et prouvé une fois de plus l'erreur de ceux qui ont donnè a cette partie de la science des lois trop absolues.*" In our next, we hope to return to the writings of these distinguished representatives of the Surgery of their respectiive countries.

UNIVERSITY OF NEW YORK.

PRACTICAL ANATOMY.

The study of Anatomy having been legalized by the Legislature, there will be an abundance of material. The Demonstrator's fee is five dollars, and the usual rates will be charged for material to defray the incidental expenses, and to prevent waste.

MUSEUMS, APPARATUS, &C.

The College is amply provided with all these facilities for instruction.

FEES FOR THE WINTER COURSE.

Full Course of Lactures	$105 00
Marticulation Fee	5 00
Fee for Instruction by the Demonstrator	5 00
Graduation Fee	30 00

REQUISITES FOR GRADUATION.

Twenty-one years of age—two Courses of Medical Lectures (one at least at this College)—three years study, and a Medical Thesis. Two commencements; one early in March, the other near the first of July.

There is a BENEFICIARY FOUNDATION which admits a limited number of students for twenty dollars and the marticulation fee.

Good board can be had in the vicinity of the College for three dollars to four dollars per week. Students on arriving will call on MR. PALMAN the Janitor of the College No. 107 East Fourteenth street, who will provide them with boarding-houses. Letters may be addressed to Prof. DRAPER President of the Faculty, University of New York.

The Spring Summer and Autumn Course of Lectures begins about the middle of March and is continued to about the middle of October. For those Studetns who do not attend the Winter Course, the fee is thirty dollars, which includes the Martriculation Fee.

NEW YORK, July 1856.

ST. LOUIS MEDICAL COLLEGE.

THE Regular Lectures in this Institution will commence on the first day of November, 1856, and continue until March. A preliminary Course at the College, as also Clinical Lectures at the Hospitals and the Dispensary, will be delivered without extra charge, during the month of October.

M. L. LINTON, M. D., Professor of the Principles and Practice of Medicine.
A. LITTON, M. D, Professor of Chemistry and Pharmacy.
CHARLES A. POPE, M. D., Professor of the Principles and Practice of Surgery and Clinical Surgery.
M. M. PALLEN, M. D, Prof. of Obstetrics and Diseases of Women and Children.
W. M. MCPHEETERS, M. D., Professor of Materia Medica and Therapeutics.
CHAS. W. STEVENS, M. D., Prof. of General, Descriptive, and Surgical Anatomy.
JOHN B. JOHNSON M. D., Prof. of Clinical Medicine and Pathological Anatomy.
J. H. WATTERS. M. D., Professor of Physiology and Medical Jurisprudence.
E. H. GREGORY, M. D. Demonstrator of Anatomy.

The most ample opportunities for clinical instruction, both in Medicine and Surgery, are afforded by the several large Hospitals and Dispensary under the care of the Faculty. There is also an abundance of material for the study of practical anatomy.

Fee for the entire Course, $105. Matriculation ticket (paid but once), $5. Dissecting ticket, $10. Hospital tickets gratuitous. Graduating Fee, $20.

Students or others desiring further information, can either address the Dean, and he will forward them a descriptive pamphlet, or on arriving in the city, call upon him at his office, south-west corner of 10th and Locust streets, or on the Janitor of the College, corner of Seventh and Myrtle Streets.

CHARLES A. POPE, M. D., Dean.

THE

LOUISVILLE REVIEW,

SEPTEMBER, 1856.

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THE

LOUISVILLE REVIEW.

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PART FIRST.

Analytical and Critical Reviews.

Art. I.—*A Practical Treatise on the Diseases of the Testis, and of the Spermatic Cord and Scrotum;* By T. B. Curling, F. R. S., Surgeon to the London Hospital, Lecturer on Surgery at the London Hospital Medical College, President of the Hunterian Society, London, etc. Second American, from the second revised and enlarged English edition, with numerous wood engravings; pp. 419. Blanchard and Lea, Philadelphia, 1846.

The first edition of this work, which appeared some twelve years ago, was received with so much favor by the reading portion of the profession that it seems a matter of surprise that a second edition was not earlier demanded. Its author is justly regarded as one of the ablest and most reliable surgeons of the British metropolis, and his opportunities for observing the class of diseases under consideration are unsurpassed. During the period which has elapsed since the publication of the first edition, says the author:

"I have continued my inquiries into the morbid changes which occur in the testicle, and have availed myself of increased opportunities of studying its diseases. In this edition, some new chapters have been added; many have been re-written or altered; and it is hoped, that nearly all of them contain additional facts of practical interest and importance. By omitting the anatomy, which formed the introductory part of the first edition, and by careful conciseness in the description of cases, I have been able to embody a great deal of fresh matter, and to add several new wood engravings without enlargement of the volume."

In his microscopic examinations he has been assisted by Professor Quekett, and Dr. Andrew Clark. He has also had placed at his disposal the Essay of Mr. Harvey Ludlow, to which was awarded the Jacksonian prize for 1853; Mr. Ludlow having been despatched "to the seat of war in the East, and in the spring of this year (1855) unfortunately died of fever at Scutaré."

After these remarks, the reader is prepared to meet with a full exposition of the present state of our knowledge on the diseases of the testis, and it will be our object to inquire into the extent to which these expectations may be realized.

We pass over many of the observations on the congenital imperfections and malformations, the numerical excesses and defects of this organ, and dwell for a few moments on his views of the "Imperfect Transition of the Testicle." Mr. Curling, as some of our readers are doubtless aware, does not follow the custom of anatomists in describing this change as the *descent* of the testicle. His reasons for so doing are that, in the usual position of the fœtus in utero, the passage of the testicle to the scrotum is contrary to gravitation and unaided by the movements of respiration. He maintains that the cremaster muscle executes the same office in the human embryo as that which it undoubtedly performs in certain animals at a particular season.

"The fibres proceeding from the Poupart-ligament, and the obliquus internus tend to guide the gland into the inguinal canal; those attached to the os pubis to draw it outside of the abdominal ring; and the process extending to the bottom of the scrotum, to direct it to its final destination. As the process approaches completion, the muscular fibres which perform so important a part in it gradually become everted, and acquire the new functions of elevating, supporting, and compressing the gland."

Paralysis and defective development of the cremaster must therefore be ranked among the presumed causes of the imperfect transition of the organ. Adhesions to the viscera, the result of intra-uterine peritonitis, may also produce the same result, as may a diminution in the size of the opening of the external abdominal ring. The fact that in many cases the testicles when thus retained, are sound in structure, and fully capable of performing their proper functions, is sufficient to prove the error of Mr. Hunter, who supposed that the fault was in the organs themselves.

Although the evidence is abundant that virility may not be impaired by this condition, the unfortunate subjects of it frequently become the victims of the deepest melancholy, and in one instance, referred to by Mr. Curling, a medical student actually committed suicide. Again, the patient is exposed to all the inconveniences and dangers of hernia, and if seated in the inguinal canal, it is liable to injury which may occasion peritonitis and death. Inflammation in the organ may give rise to many of the symptoms of strangulated hernia as we saw exemplified in a case under our care a few years since. It has been mistaken for a bubo, even by Ricord himself, who was near plunging his knife into the swelling, before he discovered his error. It is possible that some of the reported cases of bubo d'emblée were cases of the same nature, and when, as the writer is satisfied they do occasionally present themselves, supposed instances occur, we should not forget to examine the scrotum of the affected side. Professor Koch, of Munich, performed an operation for the purpose of bringing down the testicle, but the gland showed a disposition to return to its former position, "and the cure proved tedious." Mr. Curling does not regard such a proceeding with favor. The testicle has been extirpated, when a truss could not be worn to retain the hernia, or to prevent the gland from entering the abdomen. A successful case of the kind occurred to Mr. Solly in Jan. 1853. Our author's observations on "Wasting and Injuries of the Testicle," are interesting and instructive, but as our analysis must be brief, we turn to chapter iv. which treats of "Hydrocle." By this term we are to understand a chronic swelling produced by a collection of fluid in connection with the testicle or spermatic cord. Mr. Curling gives us the following tables, exhibiting the various forms and complications:

- Hydrocele
  - Of the Testicle.
    - Vaginal.
      - Simple.
      - Congenital.
    - Encysted.
      - Of the Epididymis.
      - Of the Tunica Albuginea.
  - Of the Spermatic Cord.
    - Diffused.
    - Encysted.
  - Complications of
    - Vaginal combined with Encysted Hydrocele of the Testicle.
    - Vaginal combined with Encysted Hydrocele of the Cord.
    - Vaginal combined with diffused Hycele of the Cord.
    - Oscheo-Hydrocele.
      - VaginalHydrocele combined with Inguinal Hernia.
      - Encysted Hydrocele of the Cord combined with Inguinal Hernia.
  - Of the Hernial Sac.
    - True.
    - Spurious.

Although, as our author remarks, "a hydrocele is usually distinguished without difficulty," yet every surgeon of experience is aware, cases now and then occur which are the sources of much perplexity. On this point our author observes:

"I have never experienced greater difficulty in the diagnosis of this affection, than in the case of large hydrocele extending upwards as high as the internal ring, and receiving consequently an impulse on coughing as distinct as is commonly felt in scrotal hernia. The difficulty was further increased by the thickened state of the sac and dark color of the fluid, so obscuring the transparency of the tumor, that a strong light could be only faintly perceived on careful examination through a tube in a darkened room. In this case, I took the precaution of cutting down to the sac with a scalpel instead of puncturing it with a trocar."

Dr. Abeille, in his *Traité des Hydropisies et des Kystes*, p. 421, relates the following: "*coup de maitre exécuté par Dupuytreu*," in the presence of Sir Astley Cooper. Dupuytreu was about to operate on a patient with a scrotal tumor which he regarded as a hydrocele. He proffered the trocar to Sir Astley, who declined, actuated "par le même sentiment qui avait porté Dupuytreu á le lui offrir." The renowned surgeon of the Hôtel Dieu plunged the instrument into the tumor, but it was "dry tapping" (*il n'en sort rien*). With the same imperturbable sang-froid which he manifested on another occasion when he opened an aneurism for an abscess, he coolly announced that the case was one of *multilocular* hydrocele, and that by perforating each cyst in succession the fluid would be evacuated. Dr. Abeille informs us that this was done, but the reader naturally inquires, if the latter operations were equally successful with the first when "*n'en sort rien,*" what amount of fluid did this multilocular hydrocele contain?

Mr. Curling believes that Mr. Pott underrated the value of transparency as an evidence of hydrocele. True its absence is not positive proof that the tumor is not a hydrocele, yet when present it constitutes one of the most certain signs of the disease. Again, it enables us to ascertain the exact position of the testicle, a matter of importance before attempting an operation.

The various methods of treatment are fully and fairly discussed, and decided preference given to that by injection, especially of iodine. In the first edition of his work, p. 203, Mr. Curling thus expressed himself:

> "I have found injections of lime water answer so well that I have had no inducements to make trial of new remedies, and cannot therefore speak from personal experience of the efficacy of iodine. But I much question whether this injection possesses such superior advantages as have been represented by many who have employed it."

In the second edition, p. 135, he remarks:

> "I do not believe, as some have supposed, that iodine exerts any peculiar or specific influence on the serous sac. Like other injections it acts as a stimulant, stirring up inflammation, and like them also, it is liable occasionally to fail in persons insusceptible to inflammatory excitement, though the retention of a portion of the injection in the sac more certainly insures a favorable result. . . . For these reasons chiefly I have now for several yeurs rarely resorted to any other injection."

When the injection is properly performed, he considers it "free from danger." Now the best surgeons sometimes fail to perform this operation "properly," and even the renowned veteran of La Charité, in whose hands according to Dr. Abeille no accident has occurred, and who so long regarded iodine as "si inoffensive," has lost a patient from the escape of the fluid into the cellular substance of the scrotum. In the *Bulletin de la Societé de chirurgie de Paris,* tom ii. p. 321., M. Chassaignac in commenting on the fatal case from tetanus which occurred to M. Mascarel, observes, "l'emploi de la teinture d'iode non mitigèe exerce sur les tissues une influence nuisible, aiusi que cela rèsulte de plusieurs faits déjà signales a la Societé de chirurgie." Now, simple water has proved fatal, according to Mr. Syme (*Lond. Lancet*, Am. Ed. Aug. 1855,) who employs the pure tincture of the British Pharmacopœia, and it would be strange indeed if so irritating a substance as the tincture of iodine should always prove so harmless as has been maintained by its advocates. Mr. Curling recommends for the operation a half ounce glass syringe, with a nozzle made of palladium, which is not acted on by iodine. The Edinburgh Professor, in one of his recently published clinical lectures, denominates such an instrument, "the foppery of surgery, quite unworthy of gentlemen who have in view the single object of the effectual treatment of their patients," and instead of such "niceties" he makes use of "a common sixpenny squirt" which holds just enough, and fits accurately to the canula on account of the softness of the metal of which it is made.

Is it necessary to obliterate the serous cavity in order to effect the cure of hydrocele? There can be no question that without such a result its surface may be so modified that for many years no return shall take place, yet Mr. Curling informs us that he tapped a hydrocele which had been cured by injection by Sir A. Cooper, twenty-five years before, and which had returned but six months previous to the last operation. Mr. Syme asserts his belief that in cases where the tincture of iodine is used, obliteration is always produced. He states that he has dissected testicles after the cure was complete and always found the two surfaces firmly united. Had Mr. S. given us the number of these dissections, we could better appreciate the value of his opinion. But as Mr. Curling remarks, "injections are not capable of effecting a cure in every case, nor are they adapted to the constitution." The writer has succeeded with the tent in cases where iodine injections have failed, and of late we must confess we have become somewhat partial to this mode of treatment. Not long since, we operated in a case where the cord was very much enlarged, and painful, and had we used either the vinous or the iodine injection, perhaps we might have added another to the fatal list in the practice of Lisfranc and others. A friend of ours has treated some thirty cases, by means of the tent, and has not failed in a single instance. True, the tent like all other means, has proved fatal. An instance of this has occurred in the practice of a medical friend, and has been recently communicated to us. The patient was attacked with tetanus. Another medical friend has recently informed us that his first operation in which wine was used, proved fatal from the same cause.

We must pass over Mr. Curling's excellent remarks on the various complications of hydrocele, merely remarking that in hydrocele of the cord, unlike some of the French surgeons, he would resort to the iodine injection. Mr. Syme, who never loses an opportunity of proclaiming his own superiority over the London surgeons, states in the clinical lecture to which we have before alluded, that with the iodine injection he cured a patient in a fortnight, whom Sir Benjamin Brodie pronounced incurable, because the hydrocle was large, and "one of this last kind," namely of the cord.

The application of the compound tincture of iodine over the swelling, may effect a cure in some cases, where it is small and not attended with pain. To this may be added acupuncture, and pressure. We have used the seton with the happiest results, although this remedy, according to Mr. Curling, nearly destroyed a patient treated with it by Mr. Morton.

ORCHITIS.—Under this head our space will permit us to notice but that variety known by the name of gonorrhœal orchitis. In alluding to the causes, Mr. Curling is not disposed to yield his assent to the doctrine of a metastasēs which was so prevalent in the days of John Hunter, although Mr. Hunter himself had his doubts on the subject. Injections, according to Mr. C., when employed of proper strength, are very little liable to excite orchitis. On the contrary he has observed more cases which seemed to arise from the neglect of these and other remedies. We do not think that Mr. C. has solved all the perplexities connected with the origin of this form of the disease. Vidal, no mean authority, and M. de Castelneau, defend the doctrine of a metastasēs, and the former with much force asks, why is it that, in general, but one testicle is involved? The orifices of the ejaculatory ducts are in close proximity, and both should be liable to the same influences. Why is it also that, in certain instances, orchitis passes rapidly from one side to the other, without leaving behind any trace of its existence on the side abandoned by the disease? And why do cases occur in which the vas deferens does not become swollen until after the epididymis?

Mr. Curling speaks favorably of the treatment by compression, which he states was first suggested by Dr. Fricke, of Hamburgh. Now the priority in this matter is due to Dr. Physick. At any rate he treated diseases of the testicle, by compression, in 1803, (vid. *Amer. Jour. Med. Science*, vol. iii. N. S. i. 258, 1842). Although this treatment has the sanction besides of such surgeons as Ricord, Acton, South, Langston Parker, and Egan, yet the sufferings occasioned by its bungling application at times have justified the condemnation pronounced upon it by Henry James Johnson, in his treatise on the 'Diseases of the Genito-Urinary Apparatus,' p. 212, where he compares it to the process of the buccaneers of the Spanish main, who slung their prisoners to the yard-arm by the testicles, until they had confessed where their dollars were concealed. "If the inflammation is acute, it is a piece of ridiculous cruelty; if mild it is disproportionably painful, troublesome to manage, apt to lacerate or excoriate the skin, and not a little treacherous." The last remark accords well with what has come under our own observation, although, we must admit, in some cases we have been highly gratified with its results. Syphilitic orchitis, or that occurring among the sequelæ or constitutional effects of the venereal poison, has not yet been completely investigated. At least the instances are very rare in which the surgeon has had an opportunity of investigating the morbid changes which take place in this affection. Neither Sir Astley Cooper nor Mr. Curling ever dissected a syphilitic testicle! Sir Benjamin Brodie found in a single instance the morbid appearance to correspond with those observed in simple chronic inflammation. Mr. Cusack has a paper on the subject in the 6th vol. of the Dub. Journ. Med. Science, Nov. 1835, in which he gives us the appearances presented by eight pathological specimens. These exhibited the changes produced by the disease "in all its stages of progress, from a small circumscribed tubercle in an otherwise sound testis, to the contracted, indurated, and completely disorganized gland," which changes resembled those produced by scrofulous disease. Dr. John Watson of New York, made several examinations which led him to conclude that the primary seat of the affection is in the fibrous envelope forming the proper capsule of the testis, which occasionally becomes enormously thickened, whilst the proper tissue of the testis remains healthy. The tubuli seminiferi become atrophied by pressure, &c. (N. Y. Jour. of Med. Nov. 1845.)

In the treatment of syphilitic orchitis Mr. Curling attaches the highest importance to mercury, particularly to mercurial inunctions, "a drachm of the strong mercurial ointment being well rubbed on the thighs daily." He often prescribes five grains of blue pill with a quarter of a grain of opium, night and morning, or, if the bowels are irritable, five grains of chalk and mercury with a quarter of a grain of opium three times a day. If the patient's system be much enfeebled he combines the sulphate of quinine with the mercurial remedies. A good generous diet should also be allowed, with the free use of wine or porter. When compelled to resort to mercury in these cases, we prefer the protiodide, one grain three times a day, but with Ricord and Vidal we have the utmost confidence in the iodide of potassium, a remedy which has saved many patients from castration. This operation has more than once been performed in these cases even by such surgeons as Boyer, Dupuytren, and Percival Pott, to say nothing of those which have occurred in our own country. Dr. John Watson of New York, states, in the essay to which we have already alluded, that in consultation, he once opposed it, but unsuccessfully in a case of genuine syphilitic sarcocele!

Cancer of the Testicle.—The encephaloid form is that most frequently met with in the testicle, and occurs at all ages, "though most commonly at the middle period of life." Of 51 cases collected by Mr. Ludlow in his Prize Essay, the ages were as follows:

Before the age of 5	5	cases.
From the age of 15 to 20	1	"
" " " " 20 to 30	11	"
" " " " 30 to 40	22	"
" " " " 40 to 50	6	"
" " " " 50 to 70	6	"
Total	51	"

The duration of life in this disease, according to Mr. Paget, is about 23 months.

In his lectures Mr. Paget has reported a case in which the right testicle was removed by Sir Astley Cooper on account of encephaloid disease. The left had never descended. Nearly thirteen years after the operation the patient died. In the pelvic cavity a carcinomatous tumor was found, which there is every reason to believe was the retained testicle. The writer has this day, (May 28,) examined a lad æt. 13, affected with a large abdominal tumor, springing from the left lumbar region and pelvic cavity, and whose left testicle has never passed into the inguinal canal or scrotum. Three years have elapsed since the enlargement was first discovered, and it is now hard, irregular, and quite equal in size to the boy's head. His general health is good. The only internal organ incommoded by the enormous mass is the bladder, which cannot become distended to its natural extent. May this not be an encephaloid tumor of the retained testicle? We know that in some instances, the gland attains a very large size, Boyer having removed an encephaloid testicle weighing more than nine pounds. In reference to the propriety of operating in the encephaloid disease, we will only observe, that Mr. Curling is an advocate of such a proceeding, believing that it tends to prolong life and "perhaps to save the patient the horrors and sufferings of external cancer." Did time permit, we should like to discuss this question at some length, but our limits are drawing to a close, and we can only refer the reader for the arguments *pro et con.*, to the work itself, and to Prof. Gross' Report on Malignant Diseases, in the Transactions of the National Medical Association, for 1853. As castration is now a painless operation, and in itself but seldom fatal, we do not hesitate to perform it even in malignant disease, for the objects mentioned by Mr. Curling.

SPERMATORRHŒA.—The numerous instances of this affection which have come under our observation, have led us to believe with Mr. Curling that the complaint is "more mental than real;" that is in the majority of cases. We have long been convinced that the mind needs *cauterising* far more than "the prostatic part of the urethra." And we further believe that in many of these cases the best "application" is "moderate but regular sexual intercourse." We are happy to find our author inculcating similar views. Of the *caustic* treatment, he justly observes:

"It must be viewed as only one of the means necessary in certain cases for the cure of the complaint. Sedatives, tonics, and moral treatment are required to assist its action, or confirm the good effects obtained from it."

"In severe cases marriage would be injurious, as patients are then impotent; but it may be recommended when the debilitating discharges have been arrested, and the general health improved."

"When this is effected, but not till then, marriage is desirable, as it takes away the temptation to solitary vice, and is favorable to regularity and moderation in the reproductive functions, and thus obviates the tendency to a relapse."

Mr. Curling prefers the solid caustic to the solutions of the nitrate of silver and stimulating ointment which some have so highly recommended for local application to the prostatic part of the urethra. In two cases only has he observed any ill effects from the caustic, and in these they produced a stricture, requiring in one instance the passage of sounds for six weeks to overcome the contraction.

VARICOCELE.—When Mr. Curling was preparing the first edition, he had had but little experience in treating varicocele by pressure. He published a paper in the *Transactions of the Royal Medical and Chirurgical Society*, for 1846, in which he expressed a favorable opinion of this mode of treatment. In the spring of 1847, he informed the writer that he had then treated upwards of thirty cases, by means of the moc-main lever truss, the pad of which is similar to Chase's truss. The *modus operandi* of the instrument in these cases is to take off the weight of the current from above, and to divert that from below into other channels. In his first edition, Mr. Curling thus expresses himself:

"I look with no slight interest to the result of further trials of a remedy which seems to be based on sound views of the pathology of the disease."

In 1855, after detailing his more extended experience, he writes:

"From these observations it will appear, that I consider the treatment by pressure to be applicable either for the cure or relief of the majority of cases of varicocele occurring in practice. . . . . The truss should be applied whilst the patient is recumbent, so as to make rather firm pressure at the external ring."

If, as is sometimes the case, it produce uneasiness towards the after part of the day, the pressure should be diminished by loosening the thigh strap. In general, the truss need be worn only during the day, yet in some cases the patients find greater comfort by wearing it during the night. The addition of a silk net suspender will prove of service where the scrotum is unusually pendulous, or when the veins are much elongated, forming a plexus of considerable size. As a matter of security, it should be worn for sometime after all the symptoms have been removed.

The instances are rare, according to Mr. Curling, in which an operation is required, and of the various proceediugs employed, he prefers Ricord's subcutaneous ligature.

> "It is simpler than the methods of Davat and Vidal, in which a portion of skin being included in the compression, there is more pain, and the integument is liable to ulcerate or slough, inconveniences avoided in the subcutaneous operation, which is equally effectual in obliterating the veins, and productive of but little pain and local irritation. Small, however, as is the risk from these improved operations, in no case, not even in the healthiest subject, can the tying of a bundle of veins of such size as the dilated spermatic be regarded as *wholly* free from danger."

We have been gratified with the results of this method in our own practice. We generally apply two ligatures, distant from each other nearly an inch, and instead of a tourniquet, we tighten the ligatures over a small cork or piece of a bougie. Mr. Curling regards Sir Astley Cooper's operation of excising the scrotum as too severe and uncertain. The support thus afforded, he thinks, may be equally well obtained by the use of a bandage, etc. During the past winter, we had occasion to operate in a very aggravated case of varicocele, in which the scrotum was unusually elongated, as were the tortuous veins which it contained. In this we excised not only a large portion of the scrotum but also the diseased veins. True, it is difficult to obtain union by the first intention in these cases, and the wound may not close for several weeks, yet the result in my patient was such as amply to reward him for the undertaking. Should a similar case again present itself, we shall not hesitate to repeat this *combined* operation. We know that excision of the veins is said to be attended with the risk of hemorrhage, which may, as in the case treated by Dr. John C. Warren, (*Surg. Obs. on Tumors,*) give rise to inflammation and sloughing; but the removal of a considerable portion of the scrotum obviates all danger of the last named accidents.

We have not yet tried Professor Gross' favorite method, of making a vertical incision over the tumor, isolating the veins and obstructing the circulation, by means of a needle and thread in the form of a figure 8. From his reports the duration of the treatment must be considerably abridged, as at the end of 24 hours, when the blood is coagulated, he passes a narrow bistoury underneath the veins and divides them.

We must now conclude our imperfect notice of Mr. Curling's excellent treatise, which is too well known to the profession to require praise at our hands. We have been able to examine but few of the important topics therein discussed, yet we venture to assert that the student and the practitioner cannot fail to derive from the study of its pages, both interest and profit. Mr. Curling is justly entitled to the reputation he now enjoys, of being the highest authority on the subject. The *getting up* of the present edition reflects credit upon the enterprising publishers, Blanchard and Lea, to whom the profession has been so often indebted.

G. C. B.

ART. II.—*Histoire de la Decouverte de la Circulation du sang;* par M. P. FLOURENS, Secretaire perpetual de l'Academie des Sciences, etc., etc. Paris.

SCIENTIFIC knowledge has ever been slow in its progress, and gradual in its development. No single age has ever seen the birth and the maturity of any branch of knowledge; no one man has ever been permitted to observe the primary facts and to establish the doctrines of a science. It has often required centuries to enlighten the world with a single truth, although several minds, more elevated than their fellows, have been successively illuminated by its light, long before it has pierced the darkness around them—as the highest tops of a mountain range are bright in the morning sun, while the valleys and plains below are still shrouded in darkness.

It must ever be of interest to study instances of this variable and uncertain progress. It is a pleasure to watch the struggles of the human mind, in its attempt to solve the mysteries of nature around it, and witness the exaltation at the final victory, whether won by patient industry or by the inspiration of genius. There are useful lessons to be drawn from the manner in which all great discoveries have been made, much food for reflection in the study of the causes which have retarded the advance of knowledge; and hope for the future is inspired even while we observe

> "How faint,
> How slow, the dawn of beauty and of truth
> Breaks the reluctant shades of gothic night."

The history of medicine abounds with examples of this irregular mode of advance. Celsus, in the first century of the Christian era, advises, in the treatment of hemorrhage, that a ligature be placed on the vessel above and below the wound, and the intervening portion divided. Yet nearly fifteen hundred years passed away before the principle was extended to the arteries divided in amputation; and three hundred years more elapsed before it was applied to the treatment of aneurism—a discovery, the conception and establishment of which, was alone enough to immortalize the name of John Hunter. It was not until 1761, that Avenbrugger published his work upon a new method of recognizing diseases of the chest by percussion, nor until still nearer our own time, that Laeunec applied auscultation to the same purpose; yet Hippocrates had employed a combination of both methods in the diagnosis of some diseases of the thoracic cavity.

So is the history of the discovery of the circulation of the blood, a striking instance of such an advance. It is a discovery belonging neither to one man nor to one period, but many contributed their labors to its completion, during a period of time extending from Galen to Harvey. To trace the history of this discovery, to learn how much each one furnished who assisted in making it, and to award to each his due share of praise, are the objects of the work, the title of which stands at the head of this article. This task is not an easy one, but one for which M. Flourens is eminently qualified, by a mind well adapted to original investigation, while his position, both as a scholar and a physician, gives to his conclusions the weight of authority. In his preface to the work, he tells us he was induced to write this history because he found that it had not yet been impartially done. In making some investigations on the subject he "found writers passionate, biased, and prejudiced; the true historian, the judge, was not to be found." We believe we shall be doing acceptable service to those not having access to the original work, if we follow him as he traces out the various steps by which this great discovery in physiology was made—"a discovery not less important in its relation to the sciences which appertain to animal life, than that of the law of gravitation is in its relation to mechanics or astronomy."

The ancient doctrines of anatomy were but a collection of errors. But few facts were known, and these were made the basis of false theories, while "false facts" were more numerous, and, as Cullen stated to be usually the case in medicine, more pernicious than false theories. This ignorance of anatomy and physiology on the part of the ancients is not surprising, when we reflect upon the barriers which their superstition placed in the way of dissection, while their religion taught that the spirit of the unburied corpse wandered about disconsolate, and, shut out from the company of both the living and the dead, thus effectually closed the only door to the truth on this important subject. Of the circulation of the blood, they had no idea; they taught that air was inhaled to moderate the heat of the body, and to serve as raw material from which the left ventricle of the heart manufactured the "vital spirits;" that the veins were the only blood-channels of the body; that they all originated in the liver, and that through them the blood flowed in one direction by day, and another by night, resembling the ebb and flow of the tides of the sea. It is needless to particularize all the errors, or minutely to describe the various doctrines taught previous to the time of Galen, with whom this discovery commenced. It will suffice to point out three principal errors, alluded to by the author, as having especially prevented a knowledge of the truth: 1st. That the arteries contained only air. 2d. That the septum between the ventricles was perforated. 3d. That the veins carried the blood *to* the different parts of the body, instead of *from* them. Here, as in every other department of human knowledge, the secret of the slow progress of truth in all ages is to be found in the existence of error. Here ignorance is but a passive obstacle to be overcome; error is a positive, a living antagonist to combat. The new domain to be explored had not only forests, rocks and rivers to deter the adventurer, but it was inhabited by giants and ogres, offspring of ignorance and superstition, whose castles must be destroyed before the country could be brought under cultivation.

Considering the difficulties he had to contend with, it is surprising that Galen should have made any advance at all in this subject, rather than that with his great powers he did not make more. The same superstition which had retarded the progress of his predecessors shackled him also, and he directs the student of anatomy to go to Alexandria, to study the skeleton, to visit sepulchres where bones lie exposed, and to profit by the labors of vultures on the bodies of executed malefactors! He was confined entirely to the bodies of animals for dissection, and with such modes of obtaining knowledge, he made his first discovery, as follows:

> "When an artery is opened, the blood gushes from it: then, either it was contained in it, or it came from some other place; but if the latter, the artery contains only air, air should come from it before the blood, and this is not the case; blood issues from it, and no air; then the arteries contain only blood."

Again, he enclosed a portion of an artery between two ligatures, and made an opening in it; he found only blood, therefore, "the arteries contain blood, and nothing but blood."

Here was the first error destroyed; one that had existed from the dawn of medical science, and it seems passing strange that the same admirable mode of investigation was not applied to the remainder of the subject. The same careful observation of facts could not have been long continued without showing the fallacy of the doctrines which he continued to teach, upon the origin of the veins in the liver, the transmission of blood from thence to the extremities, and the passage of this fluid through the inter-ventricular septum. With these errors, he taught truths, besides those indicated above, which were a great advance beyond his predecessors. Thus, having proved that the arteries contained only blood, he was obliged to deny that they served to transmit air, and he first maintained that this was inhaled, not to serve the body by its *substance*, but by its *temperature*. He also pointed out that there were two kinds of blood, a *spirituous* blood of the left side of the heart and arteries, and blood, properly speaking, or *venous*[*] blood. This was the first indication of a knowledge of the red and the black blood of modern anatomists.

The night of the dark ages now settled on the world, in contrast with the thick darkness of which, the knowledge of the ancients was as the light of day, and the medical shared the fate of the other sciences. Anatomical research was arrested for thirteen centuries after Galen. It is true that Mondini, who taught at Padua in 1315, dissected the bodies of two women, and wrote an epitome of anatomy. He has been called the father of modern anatomy, but he did little more than perpetuate the errors of Galen, teaching the same doctrines in regard to the passage of the blood through the septum between the cardiac ventricles, and the generation of spirits from the blood by the left ventricle. In 1544, Vesalius, the great Vesalius, was a renowned teacher of anatomy, and he alone occupies the true position of father to this branch of science. His talents elevated him to the position of physician to the Emperor Charles V., while the zeal with which he prosecuted his favorite pursuit gained for him the crown of martyrdom. He was arraigned before the Spanish Inquisition on a charge of dissecting the bodies of living persons, and was condemned to death. By the intercession of Philip II., this sentence was commuted to a pilgrimage, in returning from which, he lost his life by shipwreck, on the island of Zanté. He gave the *coup de grace* to the second error, but it was in a hesitating and faltering manner. He spoke first of the blood passing through pores in the ventricular septum, which Bérenger de Carpi had already stated to be invisible,* but afterwards, carried away by the force of evidence, he could not resist, he acknowledged that this was *only to accommodate himself to the dogmas of Galen*, and that it was impossible for a drop of blood to pass directly from one ventricle to the other. Thus the second error was disposed of, after having been upheld a long time by the authority of Galen alone, who had overthrown the first. But the influence of Galen in retarding the advance of medical knowledge as it struggled out of the dark ages, was immense. His works were unquestionable authority; from his teachings there was no appeal, and the most absurd attempts were made to reconcile them with facts which were daily coming to light. Changes were even imagined to have taken place in the structure of the human body since he wrote, to effect this purpose, and there were some, more honest than their fellows, who boldly declared they had rather be wrong with Galen, than right without him!

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* In homine cum maxima difficultate videntur. (Commentaria super Anat. Mondini; ed 1521.) Sylvius also would not admit that there were openings in the septum.

The middle of the sixteenth century saw a decided step made towards the completion of the discovery. This was no less than the discovery of the pulmonary circulation. The age was one of research and investigation: restless spirits pushed their inquiries in every direction; old doctrines were examined, tested, and rejected; for men now first became bold enough to shake off the authority of the past. As the discovery of a new continent by Columbus had extended the area of the physical world, so the discoveries in science had extended the boundaries of the domain of knowledge. The veil was lifted which had heretofore confined the mental eye to a narrow horizon, and a new and unexplored continent was seen. In religion, it was the age of reformation, when authority was no longer sufficient to bind the consciences of men; in political government it was the age when resistance was first made to despotic power, as shown in the heroic revolt of the Netherlands from the Spanish yoke; in science, it was the age of regeneration, when the divine inspiration of discovery animated all minds.

The discovery of the lesser circulation was made by Michael Servetus, who, on many accounts, deserves more than a passing notice. He was one of those bold and restless spirits so characteristic of the age. Educated first as a lawyer, he abandoned that profession for the study of medicine, and charmed by the novelty of the new doctrines in religion then just coming in vogue, he became a supporter of them, and aimed at being a leading reformer and founder of a sect. He was a man endowed with much originality of mind, with a large share of pride, and was self-willed even to obstinacy. Too independent to submit himself entirely to any doctrines new or old, he marked out an entirely new course, which he followed with energy and perseverance, attacking bitterly all who differed from him, and promulgating his own views with the zeal and rancor of a fanatic. Although a recusant from the Church of Rome, he was opposed to Calvin, especially in regard to the doctrine of the Trinity, which he combatted with all the intemperance to be expected from such a spirit, and mingled with his arguments against the doctrine, bitter personal attacks on the great Genevese reformer. By this course he won for himself the crown of martyrdom; falling into Calvin's hands, he was burnt at the stake in 1553—another victim to religious intolerance.

Servetus described the pulmonary circulation in a theological work on the "Restitution of Christianity."* To understand how he came to teach physiology in a work on theology, it is necessary to learn the part he took in regard to the latter. He attached himself wholly and obstinately to the *literal sense* of the scriptures, and accused every one else, and especially Calvin, of not understanding this. Thus, from reading that the soul is the blood, (anima est in sanguine, anima ipsa est sanguis), he attempted to explain its formation by learning the formation and the movements of the blood, and in doing this, he taught "a philosophy half theological, half physiological, wholly singular, and which he called *divine*."

He commences by denying the passage of the blood from the right to the left side of the heart through the inter-ventricular septum, and taught that its passage is through the lungs, where, he said, it acquires a yellow color, and loses its "fuliginous excrements;" from the lungs it passes back to the heart by means of the innumerable connections which take place between the ultimate ramifications of the pulmonary artery and pulmonary veins—a connection which he was the first to point out. He drew a strong proof also, from the relative size of the pulmonary artery which he maintained could not be so large if it only conveyed sufficient blood for the nutrition of the lungs.

"All this is full of sagacity, of penetration, and ingenuity. The connection, the union of the pulmonary artery with the pulmonary veins by their ultimate branches in the lungs, the calibre of the pulmonary artery, which would be much too great if it served only for the nutrition of the organs to which it is distributed—a nutrition which in the embryo is carried on without the blood of this artery—all this forms a collection of reasons excellent and decisive, which are the same we give as proof to-day, and the true ones."

With this great truth, Servetus mingled a host of errors, some of them even more absurd than any taught by the ancients, but to him assuredly belongs an honorable place among the worthies of medical science. To him undoubtedly belongs the honor of having distinctly pointed out the pulmonary circulation; from him we first learn that the blood leaves the heart by one channel and returns to it again by another, that there is in consequence, a *circuit* or *circulation*. M. Flourens awards him due honor for his discovery. Indeed he thinks, that—

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*Christianismi Restitutio.

"From a man who has had the misfortune to be burned, and to be burned for an absurd book, ought not to be taken the worthy honor of having been the first to abandon Galen, to think for himself, and by this means to make a discovery, which is in truth but an incomplete view, yet an incomplete view of a phenomenon to complete which sufficed to place Harvey among the greatest of men."

This part of the work, relating to Servetus and his book, is the most interesting portion of our author's treatise. For an appendix, he has given, in the original Latin, the physiological doctrines, extracted from the Christianismi Restitutio. In the investigation of this part of his subject he has had opportunities not generally enjoyed:

"I have seen, I have touched, the book of Servetus. A copy of this too famous work is carefully preserved in our library, and to crown all, this copy, the only one which probably now exists, belonged to Collader, one of the accusers raised up by the pitiless Calvin against the unfortunate Servetus. It belonged to the English physician Richard Mead, celebrated for his "Treatise on Poisons."* Mead gave it to de Boze. It was afterwards purchased by the Royal Library at a very high price. In it the passages are underlined by Collader upon which he accused Servetus. Finally, and to give the last mark of unexceptionable authenticity, several leaves of this unfortunate copy are charred and partly consumed by the fire. It was not saved from the pile where the work, and the author were burned together, until its destruction had commenced."

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* Mead was born in 1673, and died in 1754. He was an extraordinary man, with great natural talent and an excellent education. His greatest fame is, that he forsook the beaten path of his predecessors, and was one of the earliest votaries of experimental physiology, as shown in the treatise alluded to above. By the influence of his friend and predecessor, Radcliffe, he acquired a leading practice among the nobility and higher classes of the British metropolis, and he enjoyed the "most brilliant career of professional and literary reputation, of personal honor and wealth, and of notoriety which ever fell, in combination, to the lot of any medical man in any age or country." Of him is related an anecdote, illustrative of the times in which he lived, and which has been told in different forms of many others. Being called to visit a lady of rank immediately after dinner, while feeling her pulse he became sensible that he had imbibed too much, and speaking to himself, said, "Yes—drunk—drunk—very drunk!" The lady supposing he had discerned the cause of her illness begged him not to expose her, and she would use all her influence in his favor!

Well may we say with the author "let us turn from these frightful souvenirs. The question here, thank God, is only physiology."

In 1559, six years after the death of Servetus, Realdus Columbus of Padua, in a work entitled "*De Re Anatomica*," published an account of the pulmonary circulation. The passage of the blood through the septum is denied, and its course from the right ventricle through the lungs to the left ventricle clearly described. There is every reason for believing that this was an independent discovery. The work of Servetus was placed on the *Index Expurgatorius* of the Catholic Church, immediately after its publication, and it was destroyed wherever it was found by the Protestants. It is not at all probable that his immediate successors could have been aware of the peculiar physiological doctrines contained in it. These remarks apply also to Caesalpinus, who soon after also published an account of the pulmonary circulation, without making any reference to his predecessors, and undoubtedly without having been influenced by them. But now it is not only the *thing* which was discovered, but the *word* itself.*

Thus was the pulmonary circulation discovered and substantiated by three different persons. And Caesalpinus made another step in advance of this—a step towards the general circulation, of which there had not been heretofore a single word written. He is the first, the only one before Harvey, who remarked on the fact of the veins swelling below and not above the ligature placed on the arm for venesection. He first saw that it was irreconcilable with the transmission of the blood by the veins from the heart to the periphery of the body, and he stated plainly that "the blood, conducted to the heart by the veins, received there its last perfection, and this perfection acquired, it is carried by the arteries to all parts of the body." It seems wonderful that so familiar an occurrence, one taking place every day, should not sooner have overthrown a thing to which it was so plainly opposed; and wonderful, too, that having seen this much, Caesalpinus did not perceive the whole. "So true is it, observes Cuvier, that we are often on the brink of a discovery without knowing that we are so; so true is it, we may add, that a certain succession of time and of persons is generally necessary to familiarize men with thought before they can advance to that which is next in order."*

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*"Huic sanguinis circulationi ex dextra cordis ventriculo per pulmones in sinistrum ejusdem ventriculum optime respondent ea quæ ex dissectione apparent, etc., etc."

Anatomy must now furnish a new discovery to aid in the advance of her sister science, and this discovery was made by Fabricius ab Aquapendente, another of the many renowned anatomists, of which the city of Padua can boast. According to our author, he has two glories; he was the master of Harvey, and he discovered the valves of the veins. But by the testimony of all writers, he had other glories than these, although perhaps none other so well known. He was an honest man, a skillful anatomist, the most illustrious man of his day. Harvey bears this testimony to his skill and his virtues, and calls him a venerable old man—*peritissimus anatomicus et venerabilis senex.* He brought the valves of the veins to light in 1574, and observed that they were all in one direction in reference to the heart, and that there were none in the arteries:—"they oppose then the passage of the blood from the heart to the parts; it passes therefore from there to the heart which is the reverse of what takes place in the arteries which have no valves." He, too, was on the brink of a discovery which it was not for him to make; he could not perceive the connection of these different facts, and unite them into one great whole, but taught that these valves served to retard the too rapid flow of blood in its course, to prevent its accumulation in the lower parts of the body, and to prevent rupture of the delicate walls of the veins by their too great distension—"therefore, the arteries which are much stronger, have no valves."

"When Harvey appeared, everything relating to the circulation had been indicated or suspected; nothing had been established." Servetus, nearly a century before him, had said nothing of the general circulation; Columbus repeated the errors of Galen in regard to the origin and office of the veins; Caesalpinus mixed with his ideas of the general circulation the error of a pierced septum;

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† Whewell—History of the Inductive Sciences.

and the fallacies of Fabricius have just been enumerated. It remained for Harvey to connect the isolated facts given by his predecessors; to show their true meaning, and so establish the whole on a scientific basis. His service in doing this resembles what Newton did for gravitation; before his time, the falling of unsupported bodies to the ground, and the revolution of the planets around the sun had been known; he only showed that both depended upon the same cause, and proved by the certainty of mathematical demonstration, that his mind had seen truly this great law of the universe. Authorities upon this part of our subject are far more numerous and more accessible than those upon the periods and persons we have already discussed, and it is needless to extend our remarks upon the life of Harvey, his discovery, or his genius. The chief events of the former are generally known to the profession—the merits of his discovery are acknowledged, and willing testimony rendered to his fame wherever civilization has carried the blessings of scientific medicine.

To give a mere sketch of the course he pursued in arriving at his conclusions, is all that we shall attempt. He commenced with the movements of the heart, and demonstrated by its valves and their action, the only course the blood could take in passing through it. In the arteries he observed the flow of blood *per saltum* and showed its connection with the systole and dyastole of the heart. By that happy application of accident which genius always makes, he used a case of ossification of the crural artery, which fell in his way, to overthrow the doctrine of Galen in regard to the pulsation of the arteries being derived from the heart. From the arteries he passed to the veins, and made here his greatest advance, in showing the true use of the valves. He demonstrated everything by experiments—"they were few, decisive; such is genius." He showed that the veins would allow the blood to pass but in one direction, *towards* the heart, and not *from* it, appealing to the fact of the veins swelling below a ligature, and the arteries above it; to the cessation of the flow in the veins of a limb when a ligature is placed lightly on it; the stagnation in both arteries and veins when it is drawn tight; and by the universal drainage of blood which follows division of an artery, he showed that all the different parts of the sanguineous system were connected together.

Thus was the great discovery perfected with the exception of the changes which take place between the air and the blood in the lungs, and for which chemistry was not yet sufficiently advanced. It is impossible to estimate its importance to the medical world, opening, as it did, a new field for symptomatology, and new doctrines of pathology; it was the commencement of a new era.

> "Modern physiology dates from the discovery of the circulation of the blood. The discovery marks the advent of the moderns into science. Heretofore they had followed the ancients—they dare now walk alone. Harvey had discovered the most beautiful phenomenon of the animal economy—antiquity had not arrived at this. What then became of the word of their masters? Authority was dethroned. It was no longer necessary to swear by Galen and Aristotle, but by Harvey."

The opposition which was made by a few persons to the discovery of Harvey, has been made the subject of unbounded reproach to the medical profession. We hear it yet often repeated by the enemies of the science that the profession generally refused to receive the truth which he revealed. Nothing can be more unjust —nothing further from the truth. The chief writer against it was Riolan, an eminent anatomist and professor of the College of France, and the secret of his opposition is revealed by M. Flourens in giving a sketch of his character. He was a man devoted to the doctrines of the past, who spent his life in attempting to bring facts to sustain them, and who was not only opposed to the circulation of the blood, but to the discoveries just made in regard to the lacteal and lymphatic systems. His whole life was a struggle against "the new and unheard of doctrines which overthrew entirely ancient and modern medicine." And here, in connection with the discovery of the organs of assimilation, we have a striking instance of the difficulties with which new truths are established. Harvey himself, the anatomist, the close observer, the skilful experimenter, the profound reasoner, denied the existence of the *receptaculum chyli* which was discovered by Pecquet in 1648; and this Riolan, while opposing the discoveries of Harvey, reproaches him bitterly with opposing those of Pecquet.

Again, we say, it is base injustice to charge the profession with the rejection of this great discovery. Harvey himself complained that his practice declined very much in consequence of it, but this was the conduct of the people of his time who looked upon him as a dreamer whom it was unsafe to trust with their lives; and the absent-mindedness of this great man undoubtedly gave ground for this belief.* But his discovery was first taught in his lectures before the Royal College of Physicians, and he continued to teach it nine years before he published it. In 1652, his bust was placed in the hall of that College, and two years later he was nominated as its President, which honor he declined. Abroad, it was generally received and taught in the universities; even in France, notwithstanding the opposition of Riolan, it was publicly demonstrated by Dionis, at the order of Louis XIV., and "Harvey had the pleasure, which is often denied to discoverers, of seeing his discovery adopted during his lifetime."

Fears may have arisen in the minds of some of our readers, from the share of attention we have given to earlier periods of the history, that the object of M. Flourens' work is to detract from the fame which Harvey has so long enjoyed, and by showing the near approach which others before him made to the truth, to rob him of those laurels which he so fairly won. This is not the case. Due credit is given him for making the discovery, and the work in which he gave it to the world is called "a *chef-d'œuvre*—the most beautiful work in the annals of physiology." The general conditions of a great discovery are "distinct general notions, careful observation of many facts, and the mental act of bringing together these facts.† M. Flourens' work shows that Harvey fulfilled all these conditions; that he had a clear general idea of the subject; that he drew from experiment the meaning of the facts, and that he alone connected these facts, heretofore isolated and useless, into one symmetrical whole. Until he came,

"The crimson blood was but a crimson lake,
Which first from him did tyde and motion gaine,
And veins become its channel, not its chaine."

J. C. R.

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* We read in his life, that when he accompanied an embassay at the Court of the Emperor of Vienna, he was continually wandering into the forest, observing strange trees, plants, and earths, and in this way ran in danger of thieves and wild beasts. He was also present at the battle of Edge Hill, and had under his care the Princes, afterwards Charles II. and James the II; while the battle was raging upon which depended the fortunes of his Royal master, and his own with them, he sat down under a hedge and became so intensely engaged with a book as not to be disturbed by the cannon balls scattering the dirt around him.

† Whewell.

ART. III.—*On some Diseases of Women admitting of Surgical Treatment.* By ISAAC BAKER BROWN, F. R. C. S., Surgeon-Accoucheur to St. Mary's Hospital, London, &c., &c., 8vo. pp. 276. Philadelphia: Blanchard & Lea. 1856.

AMONG the many improvements in modern operative surgery, none deserve higher rank than those pertaining to the treatment of the accidents and diseases peculiar to females. To be convinced that much advance has been made in this direction, it is only necessary to take a stand-point in the history of this branch of the profession but a very few years back, and, looking forward, observe the number of lives now restored by the hand of the surgeon to health and happiness, which were then given up to miserable and oftentimes protracted existence, on account of maladies supposed to be incurable. Almost the youngest of us can remember when complete rupture of the perineum of more than a few weeks standing, vesico-vaginal fistula, and ovarian tumors, were seldom treated, if treated at all, with any reasonable expectation of radical cure; and, although not yet reduced from the higher class of serious complaints to which the female is exposed, every one must allow that they are at least sufficiently amenable to remedial procedure, in the majority of cases, to justify strong hopes of permanent relief, on the part of both patient and surgeon. In regard more particularly to the first two accidents just mentioned, no sufferer need despair, for in the hands of skilful operators to cure is the rule, and to fail the exception.

As may be inferred from the title, the work before us essays to treat of only a few of the accidents and diseases in question. These the author arranges under two classes: 1. "Diseases or accidents which result directly or indirectly from parturition. 2. Diseases or accidents of the female organs occurring independently of pregnancy."

Under the first section are classed Rupture of the Perineum; Prolapsus of the Vagina; Prolapsus of the Uterus; Vesico-Vaginal Fistula; Recto-Vaginal Fistula; and Lacerated Vagina.

Under the second are enumerated Polypus of the Uterus; Stone in the Female Bladder; Vascular Tumor of the Meatus Urinarius; Imperforate Hymen; Encysted Tumors of the Labia; Diseases of the Rectum resulting from certain conditions of the Uterus; and Ovarian Tumors.*

The space devoted to each of these subjects is by no means, however, commensurate with its importance — the author being governed in this matter, we presume, by the supposed lack of information on the part of his readers, and his own ability to supply the want. Thus, more than one half of the volume is devoted to the consideration of ovarian dropsy, and nearly one fourth to that of lacerated perineum.

'Laceration or Rupture of the Perineum,' including the details of eighteen cases operated upon by the author, is the subject of the first chapter. The very slight degree of laceration, involving only the fourchette, which probably all *primiparæ* suffer, and which require no particular treatment, as a matter of course receive but a passing notice, the more serious form of the accident for which operative measures are often demanded, alone claiming attention.

In regard to the relative frequency of the accident among parturient females, Mr. Brown acknowledges that he has no reliable data. Whether he considered the question as one of little importance, or was unable to obtain the desired information, he does not state. He refers in general terms to the well-known proclivity of *primiparæ* to the accident, and cites us to the statistics of twenty-four cases in his own practice, of which twenty-one occurred in first labors. But the important point, it seems to us, that needs clearing up, is the relative number of cases to first labors, and what proportion of these cases require surgical interference. In an article by Dr. T. Snow Beck, which lately appeared in the Medical Times and Gazette, this gentleman says:

> "I have before me the notes of one hundred and twelve cases of primiparæ, observed within the last five years, of which *seventy-five, or two-thirds*, had laceration of the perineum *through the whole extent;* while in thirty-seven, or just one third, no laceration took place. Unless this result had been fortified by notes made as soon as I

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* In this enumeration we have adhered to the language of the author, and need hardly call attention to the awkward appearance and dissonance produced by the unnecessary admixture of Latin and English terms. We say unnecessary, for the latter might have been readily adopted to the exclusion of the former.

returned home, and by the examination of the parts by the eye, as well as by the touch, I might have considered that some error had crept into these observations; but with the precautions taken, I feel assured of the accuracy of the result."

This is certainly a very startling statement; and despite Dr. Beck's high standing in the profession, we must confess our inability to believe it. We cannot believe it in the first place, because it is so unnatural. It is an unheard-of circumstance, that nature should have so constructed the bodies of any race of beings, that in the performance of a natural function, the large majority of them should suffer from so serious an accident. In the second place, the observations of all other obstetricians besides Dr. Beck, go to prove that laceration of the perineum *through its entire extent*, is comparatively an uncommon accident. It is true that other observers are not generally in the habit of examining the parts with the eye after every case of first labor, else they would probably find the accident to occur oftener than is generally supposed; but it seems to us very strange that by the touch a skillful accoucheur should not be able to ascertain in every case the existence of so large a rent. It is consoling, however, to know, if Dr. Beck's assertions are true, that inconvenience seldom follows the accident, only one case out of his seventy-five having required anything more than cleanliness and the ordinary attention as to posture; but this, our readers will agree with us, appears as improbable a story as the former. We repeat, that, in a medico-legal point of view, to say nothing of its bearing upon the obstetrician's peace of conscience, this question is one of no little interest; and we hope that in a future edition of the work before us—which we doubt not will ere long be called for—the author will present the profession with the necessary information.

After a brief reference to the causes, prevention, and consequences of rupture, in which we find nothing worthy of comment, the author proceeds to the treatment of the accident, The reader must bear in mind, however, that this has reference only to such cases as generally fall into the hands of surgeons, having failed to be cured by the means usually resorted to by practitioners of midwifery. Concerning the difficulties which attach to the treatment, the following language is employed:

"The difficulties to be overcome in the treatment of laceration of the perineum, have hitherto been generally regarded as almost insurmountable. This impression led to the common practice of leaving the injury to nature, whilst the frequent failure of operative proceedings induced many eminent surgeons to oppose altogether their adoption; nay, more, as Dr. Barnes writes,* 'An eminent obstetric author has sought to console his brethren under the disappointment of baffled art, by assuring them that it is better not to cure the whole laceration.'

"The situation of the wound, its nature, the structure of the parts involved, and their relations; the time which may have elapsed since its occurrence; the retraction that usually occurs; the difficulty of affecting apposition for a sufficient length of time to insure union; the irritation, inflammation, and even sloughing, apt to occur in some constitutions; the greater tendency to the growth of mucus membrane, than to union by the first intention, or even by granulation; and the difficulty of the management of the bowels and bladder during the healing process, present so many and great obstacles in the way of success in the endeavor to restore the integrity of the parts by any surgical operation, that the most skillful attempts have often been frustrated, and many bad cases abandoned as hopeless. I hope, however, in the ensuing pages, to show that these several impediments to successful treatment may be met and overcome by a simple operation, so that laceration of the perineum may no longer be reckoned among the opprobria of obstetric surgery."

Passing over the 'surgical history' of the subject, we proceed at once to give a summary of Mr. Brown's procedure, premising that he employs the quill suture, and that the only claim he lays to originality, consists in the division of the anal sphincter to prevent traction upon the sutures, and to keep the parts perfectly at rest.

The only contra-indications to operating, mentioned, are pregnancy beyond the fourth month, the existence of suppuration or inflammation, and the presence of the menstrual period. In regard to the time of selection, Mr. Brown advises that the operation be performed immediately after the accident, in cases in which the perineum is torn throughout its whole extent, thus indicating his disbelief in the probabilities of a natural cure. The immediately preparatory measures suggested, are emptying of the bowels by an aperient or injection, an unstimulating but nutritious diet for some days before, and an empty state of the bladder. The instruments required, are a common straight scalpel; a blunt-pointed straight bistoury, to divide the sphincter; a pair of long dissecting forceps; three large needles, for deep sutures; small ones for the superficial interrupted sutures; a tenaculum; pieces of gum-elastic catheter or bougie, with twine well waxed; sponges, &c. The patient is advised to be placed under the influence of chloroform, unless this sı contra-indicated or opposed.

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* Lancet, vol. ii., 1849.

The preliminaries having been attended to, "the patient should be placed in the position for lithotomy, the knees well bent back upon the abdomen, and all hair closely shaved off about the parts. The sides of the fissure should be held by an assistant, so as to insure sufficient tension for the operator; a clean incision is now to be made, about an inch external to the edges of, and equal to the fissure in length, and sufficiently deep to reflect inwards the mucus membrane, and so to lay bare the surface as far as another similar incision on the inner margin. The denudation of the opposite side of the fissure is then to be practiced in a similar manner, and the mucus membrane from an intermediate portion of the recto-vaginal septum, is to be also pared away. The denudation must be perfect, for the slightest remnant of mucus membrane will most certainly establish a fistulous opening when the rest of the surfaces have united.

"So soon as this stage of the operation is completed, the sphincter ani is to be divided on both sides, about a quarter of an inch in front of its attachment to the coccygis, by an incision carried outwards and backwards. The incision should be made by a blunt-pointed straight bistoury, which, having been introduced within the margin of the anus, guided by the forefinger of the left hand, is quickly and firmly carried through the fibres of the muscle and through the skin and sub-cutaneous areolar tissue to the extent of an inch, or even two, external to the anal orifice. The degree of relaxation to be sought must be regulated by the extent and character of the laceration; it being remembered that the freer the incision, the greater will be the amount of relaxation obtained. In every case muscular traction must be destroyed, for so long as it exists it will oppose the union of the parts."

Then follows an account of the mode of introducing the quill sutures, the author preferring the use of stout twine to silk, and substituting pieces of wax bougie for quills. These having been firmly drawn and tied, three or four superficial interrupted sutures are introduced for the purpose of approximating the skin more perfectly. The after treatment does not differ materially from what is ordinarily directed in such cases, except in the administration of opium, upon which Mr. Brown lays much stress. As much of this drug is ordered, as will place the bowels completely at rest, and its use persevered in so as to keep up a state of constipation for two or three weeks after the parts are united. The quill sutures should be removed between the third and sixth day, and the interrupted about the seventh.

In some criticisms and suggestions which succeed the account of the operative proceedures above mentioned, the author thus expresses himself in reference to attempts to procure union immediately after the occurrence of the accident, without a resort to the use of sutures or other surgical appliances.

> "A reason for deferring a surgical operation until sometime has elapsed after delivery, appears, to many practitioners, in the fact of the successful issue of some cases which have been left to themselves. For my part, I cannot admit this as a sufficient argument for delay. The maxim that "delay is dangerous," here holds good in all its force. *The chances are greatly against spontaneous cure, even in milder cases; in severe, it is vain to hope for it.* Surgical operations would be few indeed, if extraordinary cases of natural cure were allowed generally to contra-indicate resort to them."

We have italicised a passage in the foregoing extract for the purpose of drawing attention to the great diversity of opinion between Mr. Brown and Dr. Beck, upon this point. Having already expressed ourselves as being even more than skeptical concerning Dr. Beck's views, we subjoin this gentleman's statement only as one of the curiosities of professional experience that one occasionally meets with in the course of his reading. The reader will bear in mind, that Dr. Beck is speaking of "laceration of the perineum *through the whole extent.*"

> "Of the seventy-five cases in which laceration occurred, fifteen of these, or twenty per cent., healed by the first intention, and the perineum was as perfect as before the confinement; while fifty-three, or seventy-five per cent, healed by granulation, and produced a more or less perfect perineum. In not one instance has any inconvenience followed—such as prolapsus of the uterus, bearing-down pains, etc.,—and in only one case was there any trouble attending the accident."

We pass over the succeding two brief but instructive chapters in Mr. Brown's work, entitled "Prolapse of the Vagina, and Prolapse of the Uterus," and call attention for one moment to the article on "Vesico-Vaginal Fistula," simply to say that the author ascribes all due praise to Dr. J. Marion Sims, of New York, for the great benefit he has conferred on the profession and on the unfortunate sufferers with the disease in question, by the invention and application of the clamp suture. The button suture of Dr. Bozeman, which promises to supercede the clamp suture of Dr. Sims, had not been given to the profession at the time of Mr. Brown's writing, else we doubt not he would have given it the consideration to which its remarkable success in the hands of its inventor entitles it. In this connection we may mention also, that Mr. Brown omits any mention of double fistula, and we infer therefore, that he is not aware of the existence of such cases. Such do occur, and we should judge not very infrequently, as three out of the four cases reported by Dr. Bozeman in the May number of this Journal, were examples of this variety.

In the chapter on "Polypus of the Uterus," we find several things which we would gladly transfer to our pages, did space permit, especially the author's clear and satisfactory account of the diagnosis of the disease, and no one at all acquainted with the subject, can deny that it is oftentimes no easy matter to distinguish tumors of this sort from others of a very different nature that are liable to occur in the genital passages of the female. The treatment preferred by Mr. Brown, and for which he claims originality, consists in the application of the ligature and excision of that portion of the polypus external to the ligature immediately after its application.

"My reasons for preferring this method to the simple ligature are, that I have seen the most serious consequences ensue from allowing a putrid polypus to remain within the vagina. Not only does it emit a most offensive smell, detrimental to the health and comfort of the patient, but it also produces excoriation and irritation of the vagina and labia. But further, a still more serious result is the absorption of some of the secretion from the putrid mass, which poisons the system, and produces sometimes boils in different parts of the body, and sometimes abscesses in one or more organs, whilst the patient is frequently many months recovering from the effects of this poison. I find that my colleague, Dr. Tyler Smith, has also frequently observed the occurrence of boils and abscesses after this operation. Cases of uterine phlebitis succeeding the operation are recorded by Mr. Babington, late surgeon of St. George's Hospital, and also by M. Blandin. Dupuytren also relates that he met with eight or ten fatal cases, which presented all the symptoms arising from the absorption of pus into the system."

The least satisfactory chapter in Mr. Brown's work, in our estimation, is the one entitled, "Diseases of the Rectum resulting from certain conditions of the Uterus." Of the frequent dependence of rectal affections upon disorders of the uterus, there can be no doubt, but we have looked in vain through the author's account of the subject and the history of the cases given in illustration, for that clear demonstration of the several points involved in the question, which we had reason to believe his experience as a practitioner in these diseases, and his skill as a delineator would enable him to furnish.

Among the more common of these secondary diseases of the rectum mentioned, is internal hemorrhoids, an affection which, Mr. Brown, in common with most writers upon the subject, thinks is peculiarly obnoxious to females, but which, we are convinced from observation and much careful inquiry, is more commonly met with in this country among the male population. Of the absolute truth of this statement we admit there may be some doubt, owing to the natural indisposition of females to communicate the fact of the existence of such diseases; but we are certain that the number of cases of of varicose or internal hemorrhoids subjected to the treatment of American surgeons, is much less among women than men. In the only case given by Mr. Brown, the affection did not disappear upon the cure of the uterine enlargement, upon which it was supposed to have depended, but subsequently required the use of the ligature.

The other diseases mentioned as not unfrequently occurring in this connection, are, prolapsus of the bowel, fissure of the rectum, and constipation; and the author very properly advises that when any of these are found to be present in the female, the uterus should be submitted to an examination, despite the contrary opinion of the patient in reference to the existence of any such cause for the complaint. If sufficient uterine derangement to account for the affection of the rectum be discovered, of course no surgical procedure is applicable to the latter, until the former is relieved, or, at least, in a great measure alleviated.

As heretofore stated, by far the most elaborate, and, certainly the most instructive chapter in the work before us, is the one "On Ovarian Dropsy, or Encysted Dropsy of the Ovary," but owing to our limited space, we shall have to defer its consideration until a future number. The author has evidently devoted much time and labor to this subject, and to all who desire to ascertain the present state of our knowledge concerning the pathology, diagnosis, and treatment of this interesting and not uncommon disease, we sincerely commend the careful examination of Mr. Brown's investigations.

In taking leave of Mr. Brown for the present, we desire to accord to him our humble quota of praise for the benefit he has conferred upon obstetric surgery, and through it upon a class of sufferers who most of all need our sympathy and succor. T. G. R.

PART SECOND.

Original Communications.

ART. I—*The Abnormal Conditions of the Kidney in Bright's Disease.* By AUSTIN FLINT, M. D., Professor of Clinical Medicine and Pathology in the University of Buffalo.

IN 1827, Dr. Richard Bright, of London, announced the discovery that cases of general dropsy, which the researches of Blackall, Wells, Cruikshank, and others had already shown to be frequently associated with the presence of albumen in the urine, are sometimes characterized by a peculiar structural alteration of the kidneys. The validity of this discovery was slowly acknowledged by his professional brethren in the British metropolis. Dr. Christison writing more than ten years after the publication of Dr. Bright's "Reports of Medical Cases," remarks, that in a late visit to London, he was surprised to find the doctrines therein contained still questioned by some medical gentlemen. This backwardness, too common in similar instances to occasion surprise, was confined to his own city. Distinguished pathologists in other parts of the British island, and on the continent of Europe, at once recognized a new field in pathological research; and in the absence of definite knowledge of the nature of the disease newly added to the nosological catalogue, it soon became currently known by the title of *morbus Brightii*, or Bright's disease, a term which, if it be not perpetuated, has been already long enough in vogue to preclude the possibility at any period, however distant, of doubt as to the author of the discovery. Among the first to enter upon investigations pertaining to the disease, was Dr. Christison, of Edinburg. He published, in 1829, a short paper on the subject, and in 1838, a formal treatise, written with that perspicuity, and pervaded by that candid, philosophical spirit which distinguish all the varied productions of his pen. Dr. Christison designated the disease 'Granular Degeneration of the Kidneys.' Papers were also communicated to the Edinburg Medical and Surgical Journal, by Dr. James Gregory. In Dublin, the subject was early investigated by Dr. Jonathan Osborne. In Paris, the new disease at once engaged the attention of Rayer, who was at that time, and indeed at the present moment is occupied with researches pertaining to diseases of the kidney; and in the *livraison* of his splendid '*Traité des Maladies des Reins,*' issued in 1837, he treats of it at length under the head of albuminous nephritis, (*néphrite albumineuse.*) In the succeeding year, a distinct treatise on the subject appeared in Paris, from the pen of Dr. Martin Solon. During the last twenty years, Bright's disease has held a prominent place in pathological investigations and discussions, wherever pathology is cultivated. Not to attempt an enumeration of the subsequent numerous writers whose contributions have more or less value, Rokitansky, of Vienna, Fericks, of Brunswick, Reinhardt, of Berlin, and George Johnson, of London, may be mentioned as the most conspicuous among those whose names are identified with the recent and present literature of the subject.

Dr. Bright regarded the affection of the kidneys, which he discovered, as a peculiar species of degeneration, although he describes it as presented uuder three forms.* In this he is followed by Christison, who recognizes the individuality of the disease, and divides it into three stages. Subsequent investigators, however, have ceased to take this simple view of the subject. Dr. Solon divided the affection, after differences in the morbid anatomy, into five varieties. Rayer had already described and figured six. More recently, Rokitansky has extended the number to eight. These diversities are based on the gross appearances of the diseased organs in different cases, and are supposed to represent certain pathological distinctions of greater or less importance. Dr. Johnson, a still more recent writer, taking microscopical appearances as the basis of his division, treats of five different forms of disease, some of which he regards as separated widely by distinctive circumstances pertaining to the seat and nature of the affection. The simplicity of the subject, as presented by Bright and Christison, is in a great measure lost. Late researches, instead of contributing to its elucidation, tend to render it more complicated. The question, 'what is Bright's disease?' is at this time not easily answered. The existence of the disease as an unique malady, has been questioned; and by most of the distinguished pathologists last named, the individuality of the affection is virtually denied, the different forms or varieties being, in fact, according to their views, different forms of disease. On the other hand, investigations directed toward the co-existence of a structural affection of the kidneys with the presence of albumen in the urine, and the occurrence of general dropsy, have invalidated the signficance of the latter as constant symptomatic phenomena of the disease. Albuminuria and anasarca are found to occur when an appreciable degeneration of the structure of the kidney has not taken place, and, *per contra*, degeneration of the structure may not be revealed by the excretion of albumen or serous effusion into the areolar structure and cavities. In short, he who undertakes by the study of the literature of the subject, at the present moment, to make himself acquainted with its pathological and practical relations, encounters distinctions, conflicting opinions, and controversies, which can hardly fail to occasion perplexity and discouragement. Such I confess to have been my own experience, and it is with a personal sense of the sentiments just mentioned, that I propose, as a topic of inquiry, what are the general views which, with our existing knowledge, the practical physician is to adopt respecting Bright's disease? In the endeavor to answer this inquiry, the point of view from which I shall survey the subject, is that of a practitioner of medicine who has had some clinical acquaintance with the phenomena embraced under these terms, but who does not profess to have made this branch of pathology the subject of special research. This is the position occupied by the great majority of the medical profession; and none can doubt that the question is an important one. The reality of a grand discovery by Dr. Bright, is unquestionable. Numerous affections, it is sufficiently established, are pathologically associated with disease of the kidney. Now, amidst a diversity of doctrines entertained by those who have given to the matter special attention in the way of original research, what is the physician to recognize as the substratum of his faith and practice? In proceeding to the considerations which are opened up by this question, it is needless to premise that I cannot undertake to enter on a comprehensive analytical review of all the facts and doctrines embraced in the recent literature of the subject. I must confine myself to leading points, and the main object must be to endeavor to determine how far the various topics with which pathologists are occupied, concern the medical practitioner. Surveyed from the general points of view in which the subject is of interest and importance to the medical practitioner, we should be led to consider—1. The abnormal conditions of the kidney in Bright's disease; 2. The significance of the presence of albumen in the urine, or albuminuria; 3. The individuality of the affection discovered by Bright, its symptomatolgy, associated morbid conditions, sequels, pathology, diagnosis, and treatment. This arrangement covers a broad field of inquiry, and I shall limit myself at present mainly to a circumscribed portion, viz.: *to the abnormal conditions of the kidney.*

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* It is perhaps proper to state that Dr. Bright's "Report of Medical Cases," published in 1827, is not accessible to me; and any references to his doctrines, as therein presented, will be made on the strength of quotations or statements found in other works.

It would be tedious to reproduce in full the descriptions of the morbid appearances distinguishing the different phases of the disease given by the several pathologists who have been named. A condensed summary of the descriptions by Christison, Rokitansky, Frericks, and Johnson, will embody facts sufficient for our present object.

Dr. Christison, regarding the different appearances as indicating successive periods of the disease, recognizes an *incipient, middle and advanced* stage. In the incipient stage, the kidneys are flabby, friable, more or less enlarged, highly vascular, presenting points and star-like spots of ecchymosis. These are the appearances found in certain cases of acute albuminuria; that is, cases characterized by general dropsy and albumen in the urine, and running rapidly to a fatal issue. The pathological condition in this stage is supposed to be that which precedes the occurrence of a morbid deposit in the kidney. Dr. C., however, admits that the evidence of this is incomplete, and considers it not improbable that in some of these cases the disease is neither more nor less than ordinary nephritis. The middle stage is characterized by a morbid deposit. The kidney, when divided longitudinally, instead of presenting "its usual reddish-brown color and the appearance of coarse striae in nearly parallel lines, lying in a direction from the centre of the organ towards its surface, is grayish, grayish-red, grayish-yellow, or reddish-yellow, without any striated arrangement of parallel lines, but of an uniform, sometimes obscurely, sometimes distinctly, granular texture, chequered occasionally with reddish or brownish spots." The deposit, in proportion as it pervades the kidney, apparently supplants the natural structure of the organ. Commencing in the cortical substance, it extends to the portions which dip between the pyramids or tubular cones, and finally may encroach on the latter. The affection thus involves more or less disorganization of the kidneys. The organ, under these circumstances, may be enlarged, preserve its normal size, or undergo some diminution, the breadth of the cortical substance corresponding to these variations. The account given by Dr. C., of the anatomical characters belonging to this stage, depicts appearances which I have repeatedly observed in chronic cases of Bright's disease. In the advanced stage, the disorganization is more complete. The morbid deposit invades the tubular portions, which may be almost entirely abolished. The kidneys now generally suffer reduction in size; in other words, they become atrophied. The surface is rough or lobulated; the texture abnormally firm. Small cavities or cysts are sometimes observed. On longitudinal sections the cortical structure is occupied "by grayish-yellow degeneration, or by a homogeneous substance somewhat like fatty degeneration of the liver." This is an abstract of the more prominent of the gross appearances as described by Christison. His descriptions, by their clearness, simplicity, and obvious fidelity to nature, will repay a careful perusal.

Passing next to Rokitansky, this pathologist, as already stated, describes not less than eight distinct varieties. This redundance of subdivisions, which is a striking feature, if not a serious blemish of his great work on pathological anatomy, renders his account of the morbid appearances rather tedious and complicated. Condensed as much as possible, the distinctive characters of the several varieties are as follows: 1st. The characters which belong to the incipient stage as described by Christison. And Rokitansky states that "we should be obliged to consider the condition as one of very acute simple inflammation of the kidneys, were it not that the characteristic general symptoms and the constitution of the urine established it as a case of Bright's disease." 2d. "An infiltration of a grayish or grayish-red, or yellow, viscid and turbid fluid," pervading the organ uniformly or in diffused spots, small punctiform or striated ecchymoses here and there, the tissue presenting a combination of partial anæmia and hyperæmia. The organ increased in size and weight. 3d. Considerable enlargement in size and weight. The cortical substance completely anæmic, tense, friable and infiltrated with a large quantity of opaque, milky white, or yellowish fluid. The superficial layer more particularly, but also the deeper-seated parts, made up of white or yellowish-white granules, (Bright's granulations), of the size of a poppy seed, or pin's head. The portions of the cortical substance which dip between the pyramids increased and the latter therefore compressed. The granular cortical substance sometimes forcing its way between the tubuli causing the pyramids to present a frayed or unravelled appearance. The renal fascia easily detached. The mucous-membrane of the calyces and pelvis reddened. 4th. Considerable increase in size and weight. The consistency diminished, the tissue very friable and gorged with a large quantity of milky white or yellowish juice. The granulations exceeding the size of millet seeds and equal to that of hemp seeds, and they may project from the surface of the organ. The renal sheath almost unattached. 5th. The kidneys enlarged, or of normal size, or *reduced in bulk.* The surface granular and nodulated, and *in some portions irregularly furrowed and indented, and cicatriform.* The cortical tissue coarsely granulated, very vascular and congested. Cysts containing various substances, and varying in size from that of a poppy seed to that of a pea or nut, scattered here and there. *The attachment of the fascia propria more intimate, and the fascia is thickened.* The pyramids small and atrophied. 6th. The organ but little increased in size and weight. The cortical substance presenting a few undefined patches of a a pale color, the prevailing hue pale red, white, yellow, or ashy, and infiltrated with inspissated matter, resembling thick cream or coagulated albumen. *The consistency of texture normal or abnormally increased.* The pyramids, calyces and pelvis normal. 7th. Trifling increase of size, or partial atrophy. *Density increased.* The cortical substance presents patches of a dull white color without defined borders, arising from a coagulated albuminous lardaceous-looking substance in which no trace of the renal tissue remains. The organ presents the appearance and consistency of fatty catilaginous tissue. One or more of the pyramids occasionally undergo a similar metamorphosis. *The fascia propria is agglutinated to the diseased portions of the kidney and thickened.* 8th. The kidney of normal size or slightly increased, and considerably indurated. The general hue dirty red or brownish-yellow, and the cortical substance presents a fatty gloss, is unusually hard and brittle, and infiltrated with an albuminous, lardaceous and transparent substance. Occasionally a whitish flocculent deposit is seen in the tissue, of the shape of fine granular dots and lines, giving to the surface and sections a marbled appearance.

It is not easy to obtain a very clear idea of the distinctive characters which distinguish severally these varieties, and the propriety of describing all of them as different forms of the disease, is not apparent, more especially as Rokitansky states that they may be complicated with one another, and since he considers the second, third, and fourth forms as representing "progressive stages or degrees of the metamorphosis occurring in Bright's disease." The fifth form he regards as the "last link of the metamorphosis, with it the process becoming retrograde and the disorganized tissue of the viscus, presenting the condition of secondary atrophy." Now on reference to the characters which distinguish the fifth variety from the forms which precede, they are found to be, reduction in the size of the organ, which is not constant but occasional; greater consistency of texture; an irregularly furrowed, indented, cicatriform appearance of the surface, and a more intimate attachment of the fascia propria. These points I have italicized in the abstract of Rokitansky's description. The second, third, fourth and fifth forms, more particularly represent Bright's disease, and Christison's granular degeneration of the kidney. The sixth and seventh forms represent the less frequent or chronic varieties of the disease, and the latter, (quoting his words), "must be looked upon as the terminal point of the metamorphosis, as the product of the disease is retained in a state of condensation and organization, and subsequently shrivels up." The eighth form, Rokitansky regards as invariably chronic *ab initia*, and springing from inveterate scrofulous or rickety disease, but especially from syphilitic and mercurial taint, and is associated with analagous affections of the spleen and liver, in the shape of lardaceo-albuminous infiltration."

Before proceeding to notice the descriptions by Frericks, and Johnson, I shall state more fully the views of the two pathologists just referred to, as regards the morbid process or processes which these appearances involve. The sensible characters constitute the morbid anatomy, but what are the abnormal conditions underlying the visible changes which the organ undergoes? Here will be found differences of doctrine, and these diversities, it is evident, in some instances, have had more or less agency in determining the arrangement of the morbid appearances, if not, indeed, the descriptions of the anatomical characters.

Dr. Christison describes the abnormal changes without any hypothesis as to the process or processes which give rise to them. He says at the outset, that the exact nature of the degeneration is not ascertained. He compares the deposit to that of tubercle. Rokitansky considers Bright's disease to consist in an inflammatory condition. He uses, however, the term inflammation in a wide sense, embracing the process by which "most, and in a certain sense all general diseases become localized." Tuberculosis, in his view, is equally inflammatory. He also, as already stated, regards the varied anatomical characters in Bright's disease as due to metamorphosis of a morbid exudation in the kidney. The latter idea is more fully developed in the theoretical views of Frericks.

Dr. Frericks published a monograph on Bright's disease in 1851, sustaining a doctrine previously advanced by Dr. Reinhardt, of Berlin, which has the recommendation of reconciling the diversity of anatomical characters with the unity of the disease. The doctrine has met with favor not only in Germany, but, prior to the publication of Dr. Johnson's work, in Great Britain.* He resolves the affection into three stages. The first stage is characterized by congestion and exudation. Under the second stage the exuded matter, which is the plasma of the blood coagulated within the Malpighian tufts and covoluted tubes, undergoes fatty degeneration. The absorption of this fatty matter characterizes the third stage. The fatty matter being absorbed, the kidney is left more or less damaged according to the amount of permanent injury which it has received from the previous changes. The diversity of appearances are explained, after this theory, by the various circumstances pertaining to the deposit, its transformation and removal by absorption. In the first stage the kidney is enlarged from hyperæmia. The surface of the organ is smooth, and the fibrous capsule more easily stripped off than usual. The deposition is going on in this stage. In the second stage, the organ is still larger than natural, but from the fibrinous exudation, and not from hyperæmia. The appearances due to the latter disappear, and the tissue presents the pale yellow hue distinctive of fatty degeneration. The accumulation of fatty matter in the tubes gives rise to the granulations, and the roughening of the external surface. The tissue in this stage is friable. In consequence of the absorption of the fatty matter in the third stage, atrophy of the organ ensues. And as the process of absorption goes on unequally in different portions, the irregularities on the surface rendering the kidney nodulated, are accounted for. More or less wasting of the organ occurs; the texture becomes dense, and the investing capsule adheres closely. To quote from the English reviewer, the following is a summary of the doctrine of Reinhardt and Frericks: "An engorgement of the renal blood vessels, an effusion of inflammatory products, a more or less complete and general metamorphosis of these products into fat, and, finally, atrophy and wasting of the kidney. The small contracted granular kidneys have once been fat; the large, pale, kidneys are in continual progress towards atrophy and contraction."

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* I am indebted for the account of Frerick's views, mostly to a review by Dr. Johnson in the British and Foreign Med. Chir. Rev., Jan. 1853, and to an article by Prof. J. C. Dalton, Jr., in the Buffalo Med. Journal, March, 1853.

The primary and essential morbid condition, according to Reinhardt and Frericks, is inflammation. The former, indeed, designates the first stage, the *simple inflammatory stage*. Without stopping to comment on the doctrine thus briefly stated, which is certainly attractive from its plausibility and simplicity, we pass to the more recent, and more complicated views of Dr. Johnson.

Dr. Johnson describes several pathological conditions of the kidney giving rise to the symptoms which are supposed to characterize Bright's disease.* He adopts, as the basis of his division, the phenomena furnished by microscopical observations. The reliability of this basis will be the subject of remark presently. The following are the several forms of disease, which he regards as more or less distinct from each other: 1st. Acute desquamative nephritis. 2d. Chronic desquamative nephritis. 3d. Waxy degeneration of the kidney. 4th. Non-desquamative disease of the kidney. 5th. Fatty degeneration of the kidney. The significance of these titles is derived not exclusively from the morbid appearances of the organ, but also from certain abnormal products revealed by the microscope, in the sedimentary deposit in the urine. To render the distinctions intelligible it will be necessary to make some reference to the latter.

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* On the Diseases of the Kidney, their pathology, diagnosis, and treatment; with an introductory chapter on the anatomy and physiology of the kidney. By George Johnson, M. D., Lond., etc. London, 1852, 8vo., pp. 517.

1. *Acute desquamative nephritis.*—The size and weight of the kidney are increased. The surface is smooth, and the capsule easily stripped off. Certain portions of the capsular surface and the internal structure are more vascular than natural, and other portions are exsanguine. Ecchymosed spots are observed. The consistence in young and adult subjects is increased, but in aged persons diminished. These appearances accord mainly with those belonging to the incipient stage of Christison, and the stage of engorgement of Frericks, and the first of the eight forms described by Rokitansky.

Microscopically examined, the convoluted tubes which form a large part of the cortical substance; are more or less filled and distended with epithelial cells, which may sometimes be squeezed out forming "*epithelial casts*", such as are observed in the sediment of the urine. Some of the tubes are filled with extravasated blood. The vessels constituting the Malpighian tufts are thickened and filled with blood-corpuscles, which are larger and of a lighter color than natural.

The sediment of the urine during life, contains "numerous cylindrical bodies composed of fibrin, which, having exuded from the Malpighian bodies, has coagulated in the tubes, and escaping thence, presents solid cylindrical moulds of the interior of the tubes, in which are entangled blood-corpuscles and epithelial cells which have been shed, by a process of desquamation, from the surface of the tubes." To the casts thus characterized by the presence of recently formed and entire epithelial cells, Dr. Johnson gives the name of *epithelial casts*. Their average diameter is about $\frac{1}{700}$ inch.*

So far as the local affection is concerned, Dr. Johnson regards this form of disease as an acute inflammatory process seated in the lining membrane of the convoluted tubes—a catarrhal affection as it were, of these tubes.

2. *Chronic desquamative nephritis.*—This succeeds the acute affection, and offers a variety of gross appearances which the author explains by the changes supposed to be discovered by means of the microscope. Diminution in weight and bulk as the disease advances, is a result more constant than any other. The wasting affects first the cortical substance, and a result is the obliteration, more or less complete, of the lobular divisions on the capsular surface. In some instances, the kidney continues to waste and retains its smoothness of surface. In other instances, the decrease in size is less marked, and the cortical substance presents a yellowish-white, firm, and wax-like appearance, attributed to the deposit of the waxy casts, presently to be described, in the convoluted tubes. The vascularity of the organ is least where the deposit is most abundant. The contraction of the deposit gives rise to firm white granulations varying in size from a pin's head to a pea, by which the capsular surface of the kidney is often roughened.

Cysts are frequently observed of various sizes, but they are comparatively rare in cases of extreme atrophy of the kidney. With reference to these cysts, which have been already embraced in the previous descriptions, Dr. Johnson considers them as formed by dilatation of the convoluted tubes at certain points. On the other hand, Mr. Simon contends that they are "abnormal developments of epithelial germs; his theory being that certain diseases of the kidney tend to produce a blocking up of the tubes; that this obstruction, directly or indirectly, produces rupture of the limitary membrane; and that then, what should have been the intra-mural cell-growth, continues with certain modifications as a parenchytic development." This view is sustained by Rokitansky and Paget. Dr. Johnson devotes considerable space to the discussion of the subject; but it is obviously more interesting as a scientific question, than practically important.

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*These casts and the other varieties subsequently mentioned, are figured in Dr. Johnson's work.

Chronic desquamative nephritis, Dr. Johnson regards as a chronic inflammation of the renal tubes, characterized by a long-continued shedding of epithelium, which appears in the urine in a disintegrated state. "The tubes gradually lose their epithelial lining, and, subsequently, become atrophied, or filled with some new and frequently an unorganized material; or, lastly, they continue to be nourished, secrete serum, into their cavities, and so become dilated into cysts. The kidney in the advanced stages is commonly, but not invariably, much wasted, its substance firm, and its surface irregular."

The sediment in the urine, examined microscopically, is found to contain cylinders, composed of a granular material, which Dr. J. distinguishes by the title of *granular casts.* The material he regards as disintegraled epithelium. At a later period, other casts are observed mixed with the granular casts. These are of larger size, having a peculiar whitish, waxy appearance, and a well-defined short outline, their diameter being about $\frac{1}{500}$ inch. The size of these casts is about the same as that of the renal tubes, and they are considered as having been moulded in tubes which have been deprived of epithelial lining by the desquamative process.

3. *Waxy degeneration of the kidney.*—Certain cases are characterized by the abundance of the waxy casts, just described, in the sedimentary portion of the urine; and they may neither be preceded by, nor associated with, the true desquamation, either in an acute or chronic form. Dr. Johnson considers these cases as constituting a distinct form of disease. The cortical substance of the kidney presents an anæmic and pale waxy appearance, forming a strong contrast with the medullary cones. It may be remarked here, that, even assuming the correctness of the basis of Dr. Johnson's divisions, the propriety of making this a distinct form of disease, is certainly questionable. The size of the waxy casts, however, as significant of the absence of epithelium, and denoting an advanced stage in the progress of disease, is both interesting and important.

Non-desquamative disease of the kidney.—This form is distinguished from the preceding forms, by the absence of the evidence of desquamation of the epithelium of the renal tubes. Cases presenting this distinctive feature, according to Dr. Johnson, may be acute or chronic. In cases of the latter, the kidneys are usually larger and heavier than natural—the increase in weight exceeding that in bulk. "The most constant and characteristic appearances are gradually increasing wax-like pallor of the cortical substance, and a loss of the color which depends on its vascularity, while the medullary cones retain their vascularity, and have a pinkish color. As the disease progresses, the lobular markings generally become obliterated over a large portion of the capsular surface, until at length there remain only a few small, isolated, vascular patches, as represented in Dr. Bright's fourth plate."*

Hemorrhagic spots are scattered here and there in the cortical substance. The capsule is readily removed. The surface is smooth and ungranulated. The kidney admits of being injected only to a very limited extent.

Microscopically examined, the convoluted tubes generally appear to be simply more opaque than usual. The absence of a morbid deposit within the tubes, is the distinguishing negative feature. Dr. Johnson accounts for the increase of size on the hypothesis of hypertrophy.

5. *Fatty degeneration of the kidney.*—Fatty degeneration of the kidney consists of two varieties, viz.: 1. *Granular fat kidney;* and 2. *Mottled fat kidney.* *Granular fat kidney,* Dr. Johnson regards as in some cases eventuating from the form last noticed, viz.: non-desquamative disease, and in other cases succeeding acute desquamative inflammation. The kidneys present the general characters just described as belonging to non-desquamative disease. Their size and weight are increased, the surface is smooth, and the cortical portion is pale and non-vascular. They are characterized, in addition, by yellowish-white granulations, which resemble the so-called atheromatons patches in arteries, are found, on a microscopic and chemical examination, to be composed

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* The lobular divisions of the kidney in health, are pentagonal or hexagonal in form, and average about one-eighth of an inch in diameter. They bear an analogy to the lobules of the liver.

almost entirely of fatty matter. A large proportion of the convoluted tubes, under the microscope, present the same appearance as the non-desquamative form last described; but some contain the white wax-like material, and occasionally some are filled with blood, giving rise to hæmorrhagic spots which are visible by the naked eye. The charcteristic appearance just mentioned of this form of disease is due to the presence of oil-globules in a greater or less proportion of the tubes. The oil is formed in the epithelial cells, and it exists in abundaace in proportion to the progress made in the process of fatty degeneration. As this process advances, the cells assume a globular or oval form, and when completely filled with oil-globules they appear opaque and dark. Rupture of the tubes frequently takes place from over-distension by the enlarged cells containing oil. The oily or fatty nature of the material forming the yellow granulations visible with the naked eye is shown, first, by the peculiar and characteristic appearance of the globules when examined by the microscope; and secondly, by the fact that both the granulations seen by the naked eye, and the globules visible by the microscope are entirely removed by digestion in ether. The fatty granulations may be few in number, or thickly disseminated through the cortical substance. Dr. Johnson admits that some of the oil is a product of a metamorphosis of a fibrinous or albuminous effusion into the tubes, but he thinks a small portion only has this origin, the greater part being contained in distinct cells.

The sediment of the urine in this form of disease is found to contain small waxy casts, in which are entangled a few globular or oval cells enclosing a variable number of oil-globules. This constitutes a distinctive trait of the present form of disease, contrasted with that last noticed, which is ascertained during life.

In *mottled fat kidneys*, the organ is usually increased in size and weight; the color of the cortical substance is either uniformly pale, or more frequently mottled by red vascular patches, and occasionally hæmorrhagic spots are observed; the medullary cones retain their natural color and vascularity; the kidney is usually softer than natural. Microscopically examined, everywhere the convoluted tubes are found to be greatly distended with oil, which has accumulated in their epithelial cells. The oil-globules are of a larger size than in the granular fat variety. The yellow granulations visible by the naked eye in the former variety, are not apparent in this, these granulations being the result of certain tubes distended with oil, while the surrounding tubes are nearly or quite free from this material. In the mottled variety, the peculiar appearance arises from the convoluted tubes being almost invariably and equally filled with oil. In this variety, a large quantity of oil is obtained from the kidney by chemical analysis; even so large a proportion as ¼ of the solid substance has been found to consist of this matter.

Advanced fatty degeneration, in the opinion of Dr. Johnson, is the most hopeless form of renal disease. And when this condition is indicated by urine highly albuminous, and by the presence of numerous oily casts and cells in the sedimentary deposit, he regards the malady as not less serious and intractable than tubercular disease of the lung. In waxy degeneration and non-desquamative disease, the prognosis is less favorable than in the acute or chronic variety of the desquamative form.

Assuming the correctness of the observations of Dr. Johnson, (and certainly I am not prepared to question their accuracy), it is obvious that the foregoing classification rests measurably on speclative ground. Without specifying points purely hypothetical, which will suggest themselves to the reader, the adequateness of microscopical appearances to serve as a basis of the pathological distinctions involved in his division and descriptions, is inadmissible. By this remark, I am far from intending to disparage the microscope in researches pertaining to morbid anatomy. Its great value in this relation is unquestionable. And with respect to the abnormal conditions of the kidney in Bright's disease, its utility is not to be denied. But to predicating the anatomical characters of disease solely, or even mainly on the revelations of the microscope, there is this serious if not insuperable objection, viz: the examination cannot, without an immensity of labor, embrace the totality of the organ or part diseased, but must be limited to extremely minute portions. This difficulty is well expressed in the following quotation from a paper by Dr. T. K. Chambers, on the subject of the present article. "In microscopic researches, no count can be kept of what is, practically speaking, one of the most important elements of pathological classification—namely, the extent of distribution of morbid processes. The existence of a particular diseased state in the small piece or pieces which are submitted to the lens may be easily made evident; but whether this diseased state is an accidental local circumstance, or is spread through the organ in such amount as probably to interfere with its functions can only be judged by the naked eye. To set down microscopic deviations from health as *the* disease would lead to mistaken views. For example, the hearts of few chronic invalids can be examined without some part of the muscle exhibiting that granular condition which is found when the fibre is about to become oily, but to designate all these hearts as instances of fatty degeneration, and to suppose that they had any calculable influence on the duration of life, as distinct from the general diathesis, would surely be a serious error. Yet such, I think, would be the result risked by adopting microscopic appearances as a principle of pathological division."*

We come now to the question, What are the ascertained facts respecting the abnormal conditions of the kidney in Bright's disease, which it behooves the physician to know and recollect? In other words, what are the points pertaining to the descriptions and distinctions just passed in review, which are satisfactorily established, and which possess practical importance? Eliminating all that is doubtful or superfluous, and it will be found that observations since the publications of Bright and Christison have not added much that is positive and practically useful to our knowledge of the morbid changes incident to the disease. I shall attempt to embody in a few words, the sum of what is actually known of these changes, in so far as concerns their nature, seat and pathological relations.

1. It is abundantly established that albuminuria may exist together with anasarca and other symptomatic phenomena, and death take place without a morbid deposit in the kidney sufficient to give rise to an appreciable alteration in its gross appearances. In certain cases it is found to be simply more or less engorged, enlarged, and friable, the capsule easily detached owing to serous effusion into the subjacent areolar tissue; and in some instances, even these

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* Decennium Pathologicum. Brit. and For. Med. Chir. Rev., April, 1853.

morbid characters are wanting, the organ appearing to be healthy. Dr. Johnson gives a case exemplifying the fact last stated, under the head of "non-desquamative disease of the kidney." In most of such instances, according to Dr. Johnson, microscopical examinations would be expected to reveal morbid conditions of the renal epithelium. But his own observations show that if this be the rule, it is not without exceptions. And these exceptions render it extremely doubtful whether Dr. Johnson be correct in regarding the epithelium of the convoluted tubes as the point of departure of the local affection in the cases included under the head of "dequamative nephritis." To deny that the evidence of desquamation of the renal epithelium is afforded during life and after death in some cases and not in others, would be to question the accuracy of Dr. Johnson's observations. But it may fairly be doubted whether this constitutes a radical pathological distinction, and the propriety of the nosological division into desquamative and non-desquamative disease is therefore questionable. The simple fact is, that in certain of the cases characterized by the phenomena of Bright's disease, the sediment of the urine abounds in casts, and they are found in the convoluted tubes after death, while in other cases the urine is free from casts and none are discovered in the tubes.

It may be remarked here, that the existence of Bright's disease as determined by the symptoms during life, without any appreciable lesion of the kidney being apparent after death, is a strong argument in favor of the doctrine that the essential pathology of the affection involves blood-changes anterior to those occurring in the kidney. In these cases the disease runs a rapid course. They are cases of *acute* albuminuria; and it may be presumed that the fatal termination occurs too quickly for those morbid alterations in the structure of the kidneys to take place which are generally found in chronic cases. The opinion held by most pathologists is, that prior to the lesions due to a morbid deposit, for a greater or less period the only appreciable morbid condition is a state of congestion or hyperæmia; in other words, that this condition is the first link in a chain of sequences. However probable this may be, it is only an inferential conclusion, not an ascertained fact.

2. In most chronic cases presenting the symptomatic phenomena characteristic of Bright's disease, structural lesion of the kidneys

is manifest. The appearances are by no means uniform, as has been seen in the numerous varieties described by distinguished pathological observers. In accounting for the diversity of morbid changes, there is scope for speculation, and it is important to discriminate between that which is ascertained and that which is hypothetical. A just ground for a division is the existence, or not, of atrophy of the kidney. The organ may be increased in bulk, or retain its normal size on the one hand, and, on the other hand, its volume may be more or less diminished. What are the facts pertaining to the non-atrophous condition? The appearances are due, directly or indirectly, to the presence of a morbid deposit, doubtless primarily taking place within the convoluted tubes and capsules of the Malphighian bodies which form the cortical substance of the organ. The deposit occurs first in the peripheral portion of the cortex, and progressively advances from the surface to the centre, extending at length between the tubular cones, and even between the individual *tubuli,* and finally encroaching more or less on the space which belongs to the medullary portion of the organ. The character of this deposit, as studied in different cases, differs considerably. It may consist of coagulated fibrin, with or without blood corpuscles; accumulated epithelium, oil globules, and granular fat—these varieties being either separate or more or less combined. The gross appearances will differ according to the character of the deposit, the extent of its diffusion, and its abundance in the portions affected. The size of the organ, its color, its consistence, the irregularity of its surface or its smoothness, the absence or presence of the lobular markings, etc., will depend on the variations just referred to in connection with local hyperæmia or anæmia, the latter resulting in a great measure from the presence of the deposit. These are facts pertaining to the morbid anatomy of the disease. Now as to the relations of the different forms of deposit to each other, and still more their relations severally to ulterior pathological conditions, opinions, with our present knowledge of the subject, must be speculative. It may fairly be doubted whether we are authorized to base on these diversities of appearance important pathological distinctions. Whether the exudation of fibrin be the primary step in the processes of structural alteration, and the detachment of epithelium be simply a mechanical result, according to Frericks; or whether the epithelial cells first become affected, and are shed in more or less abundance as a consequence of an effort to eliminate a morbid material from the blood, as contended by Johnson, must be considered as a question open for discussion and farther investigation. So with respect to the different kinds of deposit; do they severally preserve their peculiar character, or do they succeed each other? This question has an important bearing on another, viz.: whether the various morbid conditions grouped under the title of Bright's disease, are different stages of a single affection, or, in fact, constitute different affections? In fatty kidney, was the original deposit fat, or does this species of degeneration take place as a sequel to albuminous exudation? Assuming the latter to be true according to the theory of Reinhardt and Frericks, does fatty degeneration occur by *conversion*, as contended for by the authors just named, and also admitted in part by Johnson, or must this change always of necessity take place by *substitution* in this as well as in other situations, on the principle adopted by Robin and others, that protein substances never undergo metamorphosis into fat? These are questions of scientific interest, which we must at present consider as unsettled. So, also, with respect to the nature of the morbid action which gives rise to the deposit, is it, or is it not, inflammatory? In other words, does Bright's disease involve nephritis? This question belongs in the same category as the foregoing. If the fact of fibrinous exudation be sufficient evidence of inflammation, then, unquestionably, this process is often involved; but the inquiry arises whether, in view of the capillary vessels which form the Malphighian tufts, lying loose and uncovered within the dilated extremities of the convoluted tubes, it is not quite probable that mere congestion may lead to the effusion of the liquor sanguinis in this situation.

There are various morbid appearances which are evidently due to merely accidental circumstances. Such are the stellated spots of ecchymosis, the cysts ascertained by the microscope, and also by the naked eye, attaining in some instances to a considerable size, and inflammation of the mucus membrane lining the calyces and pelvis. I mean by the term accidental that they have no necessary connection with the local morbid conditions belonging to the disease. In this respect they differ from changes incidental to a morbid deposit, such as increased breadth of the cortical substance, friability, anæmia, etc.

3. The foregoing remarks have had reference to non-atrophous kidney. A marked reduction in size constitutes in itself a highly distinctive feature of a class of cases of Bright's disease; but it is associated with peculiar morbid appearances pertaining to the form and the internal structure of the organ. The atrophy not going on equally in every part of the kidney, gives rise to an uneven lobulated surface; to the granulated aspect, the cicatriform furrows and the puckerings which are observed under these circumstances. The texture becomes hard and resisting. The capsule adheres with an unnatural firmness, so that in peeling it off small portions of the substance of the kidney are torn away with it. The wasting affects primarily and chiefly the cortical portion, which is sometimes reduced to an extremely thin layer, the normal structure, in fact, entirely disappearing.

Pathologists generally are agreed in regarding these changes as consecutive to those which belong to the non-atrophous condition. The morbid deposit first supplants the normal structure; and, in fact, it induces atrophy of this structure, while the bulk of the organ (owing to to the presence of the deposit) is not diminished. The reduction in size takes place as the result of the elimination of the morbid deposit within the tubes, possibly its removal in a measure by absorption, together with the contraction or carnification of portions which remain. Many interesting questions are involved in the mechanism of these alterations; but, with our present knowledge, they would lead only to opinions and hypotheses, not to fixed facts of science.

In attempting to determine by means of an analysis, and a comparison of the observations of different pathologists, the sum of our actual knowledge of the abnormal conditions of the kidney in Bright's disease, we are led to the conclusion that the subject is still shrouded in confusion and difference of doctrine. But this is not surprising; nor does the fact militate against the individuality of the disease. To cite an illustration which has been used for this purpose by more than one writer, until quite lately the morbid anatomy of tuberculosis of the lungs offered not less scope for doubts,discussions and diversity of opinion. Even more important questions remain to be settled. The nature of tubercle, its primary seat, the local process upon which the exudation depends, its dependence on a peculiar diathesis, the changes which the deposit undergoes, the mode in which they are effected, the relations of the different forms of deposit to each other, etc., etc., are points of scientific interest and practical importance, which are becoming understood in consequence of continued investigation. But, notwithstanding, they have not been heretofore, and are not yet, in all respects,explained, the existence and the unity of the disease called pulmonary tuberculosis, has not been questioned. So with regard to the morbid appearances of the kidney in Bright's disease; when the lesions on which they depend are more fully known, their mutual relations will be apparent, and it will probably be more evident than at present, that their pathological origin is not in the kidney, but that the changes in this organ constitute the local expression of a peculiar dyscrasia.

Passing from the consideration of the morbid anatomy of the disease to its pathological consequences and clinical history, we enter on a field more satisfactory and attractive. The obscurity which hangs over the anatomical characters does not pervade, to the same extent, the immediate effects of the structural lesions. These effects consist, 1st, of the transudation into the uriniferous tubes of certain of the elements of the blood; and, 2nd, of a deficiency or absence in the urine of certain important constituents of that excretion. Taking these immediate effects as a point of departure, and determining remote consequences by means of clinical observations, the study of the disease becomes at once invested with great interest as well as importance to the physician. We may resume the subject at some future time, with the hope of making some amends to the reader, for the tedious and dry details which necessarily belong to the consideration of the branch to which our attention has been restricted in this article.

ART. II.—*On the Treatment of Typhoid Fever.* By W. Y. GADBURY, M. D., of Benton, Miss.

It is with some diffidence that I venture to propose a plan of treatment in this disease, based upon a comparatively limited experience;

but the discordant opinions of medical men as to its therapeutics would seem to justify additional facts, especially in regard to internal medication. It is generally admitted to be a specific disease, having no special lesions, and without any specific remedy; its treatment is, therefore, mainly empirical.

It is proper to premise before entering into details, that most of the cases that have come under my observation occurred in negroes. In them the disease presents, perhaps, more adynamia, and therefore bears less depletion, and requires a more sustaining course of treatment. With this exception there is no essential difference.

Prevention.—In the sub-epidemics that prevail in negro quarters, care should be taken to prevent the disease from spreading. When they are too much crowded they should be dispersed; the houses should be well ventilated, cleansed, and white-washed; the filth and trash removed from the yard, and beneath the floors; superbundant shade trees cleared away, and ditches made to drain damp places, that the earth may dry thoroughly.

The diet should be more nutritious and diversified, and less salty than is usually allowed. The servants should avoid exposure to night air and inclement weather, perform less labor, and be allowed more time for sleep. The wearing apparel should be clean, and adapted to the season. In short, everything should be done to invigorate the system and promote cheerfulness.

If the servants are examined on a plantation where this disease is prevailing, many of them will complain of lassitude, and exhibit a pale, tremulous tongue, with scanty secretion of saliva, muddy streak in the eye, and probably some muscular tremor when the arm is held up, indicating nervous exhaustion. Whether this condition is owing to the existence of a poison in the system in a latent state, or whether it is a mere predisposition, or "typhus diathesis" as Doctor Drake terms it, attributable to perverted assimilation and nutrition, cannot be determined from the lights before us. To remedy this condition, I enjoin repose from labor, and prescribe 2 oz. of peruvian bark with 3 grs. of cayenne pepper three times per day, with a liberal allowance of mutton or chicken broth, boiled milk, and the most nutritious farinacious substances.

The treatment of the disease is somewhat dependent upon the season of the year and the previous habits and condition of the patient. For example, we cannot apply cold water to the surface as freely in cold as in warm weather, for fear of inducing pulmonary disease; nor can we subject the negro, the intemperate, or the previously debilitated, to the antiphlogistic regimen which is sometimes required in persons of a higher class, and those of more vigorous constitution. The principal objects to be attained in the treatment are, first, the reduction of febrile excitement; secondly, the mitigation of local affections; and thirdly, the prevention of asthenia. These indications are so intimately connected and dependent upon each other that it is difficult to treat of them separately, but it is well to bear them in mind, as they will serve as landmarks to guide us in directing remedies.

Treatment of the first stage.—The patient's hair should be cut close, and, if a negro, the skin well cleansed with soap and water. He should then be placed on a clean bed in a well ventilated room where there are no others that are sick, and all agents of an exciting or depressing nature withdrawn.

The treatment may be commenced with an emetic of ipecac, except it be in the heat of summer, when such medicines are apt to produce watery operations, which enfeeble the general system and aggravate the intestinal disorder. When there is pulmonary complication, or an overloaded state of the stomach, it is especially indicated. After this, a gentle laxative may be given, composed of four grains blue mass, one grain of ipecac, and one grain of extract hyosciamus, repeated every third hour until it operates. If it should fail to cleanse the bowels in twelve hours, its action may be hastened by giving castor oil. When the paroxysm has risen to its acme, the propriety of general blood-letting may be considered. In a practice of several years in this disease, I have bled but one case, and in that one no impression was made upon the progress of the disease. Several cases occurred where the pulse was firm and under 120 per minute, which seemed to require the use of the lancet, but upon placing the patients in a semi-erect posture, and keeping them in that position for a few moments, the pulse would become soft and increase rapidly in frequency, which determined me to abandon it except where the necessity is clearly indicated. If symptoms of cerebral hyperæmia or inflammation appear early in the disease, with sufficient vigor in the system, the lancet, followed by the ice cap, would, no doubt, be the most efficient means to subdue it.

Local depletion, repeated at short intervals, when there is considerable determination to any of the important organs, especially the brain, should be practised, with a view to keep down ulterior complications and prevent fatal disorganization. It may even be repeated in the middle stages, where sudden congestions arise, with good effect, whilst, perhaps, we are compelled to support the sinking energies of the system with tonics and stimulants. In negroes, it is necessary to exercise great caution in depleting the system, for fear of inducing sudden prostration. By taking small quantities of blood at a time we can ascertain how far we can go without incurring risk.

To further reduce the febrile excitement, cold water is the most grateful and efficient means we have. The temperature of the surface should be kept uniformly reduced and as nearly equalized as possible. Cold water and vinegar, or the former alone, should be sedulously applied to the surface in warm weather, so long as the patient feels comfortable under its use. The position of the patient ought to be frequently changed, that the fluid may evaporate from the back as well as the front of the body. When the head is hot, large quantities of cold water should be poured on the neck and occiput until the heat is reduced, after which the feet and legs may be immersed in hot mustard water, whilst cold cloths are applied to the head. This process, with or without the bath, may be repeated with advantage, as often as the inordinate heat of the head returns. If the fever should continue unabated in spite of all our efforts to reduce it in warm weather, cold affusion may be resorted to. The pouring should be confined to the head and body, and continue until the heat of the surface is entirely reduced, unless the patient complains of being chilly. He should then be placed in bed without being dried, and covered lightly. If, before using the bath, there had been only moderate heat of surface with sighing jactitation and rapid pulse, it is better to envelop him in a wet sheet and several blankets, so as to encourage free determination to the surface. The affusion, when once commenced, should be repeated whenever the morbid heat and excitement return. After taking the bath once or twice, the patients will often fall into a pleasant slumber and perspire gently, which leaves them much refreshed. Ice used internally, to any extent, is, at least, of doubtful utility. As a febrifuge it is not superior, if equal to cold water, and the free indulgence in it begets a desire for more, and if allowed ad libitum, the desire becomes insatiable. For several years I have prohibited its use except in gastric irritability, and then only in small quantities or when dissolved in fluids taken by the patient.

Cold mucilaginous drinks may be taken whenever the patient desires water, with the precaution to avoid disturbing the stomach by too much at once; if the thirst is very great they may be made cooler by the addition of ice.

Cold mucilaginous injections are too much neglected in this disease, judging from the feelings of comfort expressed by patients after taking them. The one which has seemed to be most often retained with comfort,is a mixture made by dissolving the white of two eggs in a half-pint of water, which may be used two or three times per day. If the bowels are disposed to throw it off, the addition of some one of the preparations of opium with ten grains of acetas plumbi, will quiet the irritation, and cause its retention.

Carthartics.—After once emptying the alimentary canal, one free evacuation daily is sufficient. When there are two or more copious discharges within that time, they should be checked, and the bowels kept in a quiescent state for thirty-six or forty-eight hours. The mildest and least irritating laxatives should be chosen. From four to six grains of blue mass, given at night, or every alternate night, as the case may require, will promote the biliary secretion, and operate without giving pain; it has, besides, the advantage of being a gentle alterant, and always keeps the bowels in a more quiet condition than almost any other remedy of its class. If it does not operate by the succeeding morning, small and repeated doses of castor oil, with the addition of ten drops of turpentine to each dose, may be given to hasten its action. Laxative enemata should not be relied upon, except as adjuvants, as they sometimes act only on the lower portion of the canal, leaving the morbid secretions accumulated in the small intestines. Care should be taken not to continue the blue pill until it produces ptyalism, for this would create an irritation in the system that might hazard the patient's recovery. This can be avoided by attention to the odor of the breath, and by giving the medicine, after the first few days, only once every third or fourth night, until the operations become darker and more consistent, when it should be discontinued or administered cautiously. In the meantime, if necessary, a daily operation may be procured with castor oil; and if torpidity supervenes, laxative enemata may be employed.

Diaphoretics.—There are few of this class of medicines that can be used in this disease without disturbing the bowels to a pernicious degree, especially if continued for several days in succession. The vegetable acids are not only used as a beverage, but by some supposed to possess cooling sudorific properties, and an alterative effect upon the blood, which is considered to be in a condition analogous to that in scorbutis. In regard to their sudorific and alterant properties, if they have any, the impress is so slight that their beneficial effects are often overbalanced by the increased peristaltic action of the bowels they occasion, and the restraint put upon the already acid excretion from the skin and kidneys, especially in the first stage, which prevents that depuration so essential to a favorable issue. I am not opposed to their occasional use, when ardently desired, but think their indiscriminate use often does serious injury.

Of the saline substances, those that appear to be least objectionable, are the cit. and bi-carb. potassa; the latter being preferable. A solution made by dissolving 1 oz. of the bi-carb. in 6 oz. of water, may be administered in ounce doses, at short intervals during the day, which will generally act upon the skin or kidneys. Its value may be enhanced by the addition of from a half to one grain of ipecac, and a small portion of morphine, to each dose. In using saline or nauseating diaphoretics, a tentative course should be observed, occasionally omitting them in order to ascertain whether the patient will not do better without than with them, for they sometimes disturb the bowels when we least expect it. Warm teas are generally admissable at any stage, and are particularly indicated when there is pulmonary complication. Some patients prefer them to cold fluids. Ginger tea will answer this purpose, and in addition will aid very much in keeping down tympanitis. Quinine and opium will be treated of hereafter.

Local Lesions.—Although the search for some specific remedy has not been abandoned, the rational and expectant method of treatment is gaining ground, and is probably the only safe one that we can adopt in the present state of medical science. Whilst some patients die of this disease without presenting any abnormal development apparent to the pathologist sufficient to account for death, the great majority of them do present lesions of the most serious character, even more uniformly than in any other form of fever; and we do not despair that the scalpel, microscope, and analytical chemistry, will yet reveal those pathological mysteries. Owing to the nature of the exciting cause, or from some predisposition in the system, various incidental local affections occur, which will account for some of the modifications which the disease presents. Thus, in the summer we have hepatic and splenic engorgements, with high mucus irritation; and in the winter, complications with bronchitis and pneumonia. I have seen an epidemic commence as pure, uncomplicated typhoid fever, and terminate in typhoid pneumonia, and vice versa.

After trying many internal remedies recommended as healing agents for the condition of the bowels, I have settled down upon opium, acetate of lead, and turpentine, and think they possess more efficiency than any others. Opium calms the nervous irritation, which, if left unsubdued, results in jactitation, and subsultus, besides promoting diaphoresis, and keeping the bowels in a quiescent state. Stupor, with occasional delirium and throbbing of the carotid arteries do not contra-indicate its use, for these symptoms are often present when inflammation of the brain does not exist. But when from deep-seated pain in the head, intolerance of light, an unnatural expression of the eye, with excessive heat of the scalp, or wild delirium, there is reason to suspect the presence of inflammation, opium should be withheld until this condition is remedied by appropriate means.

Immediately after the first free watery discharge from the bowels, I prescribe one grain of pulverized opium, or a corresponding dose of acetate of morphia, with three grains of acetate of lead, to be repeated after each thin operation throughout the disease. If the discharges are frequent, it is advisable to alternate the mode of administering these remedies with enemas of three or four times the quantity, dissolved in a half-pint of the egg-water previously mentioned. Laudanum or the acetate of morphia may be used if the opium is not retained. I have used the acetate of lead internally and by enema for thirty days in quantities sufficient to control the bowels, and have never witnessed any bad effects from it. The dose of opium and lead may be graduated according to the indications. Two or three powders, by the mouth, alternated with an enema, will generally suffice for twenty-four hours, and often one will answer. Opium or morphia should always be given at night when the patient is troubled with insomnolency, unless it is contra-indicated.

Whenever tympanitis occurs, as it does during the first week, evinced by swelling of the bowels and resonance under percussion, turpentine is indicated, and should be continued until this symptom disappears. I have rarely known any good effects from it before this condition supervened or after it had subsided. It is a gentle stimulant and alterant to mucus surfaces. Unlike most other similar medicines it enters the circulation unchanged and permeates the tissues of the body, increasing the secretions, and perhaps the action of the whole secernant system, and effects a radical change of morbid action in mucus surfaces. Ten drops given in a little water every three hours will generally suffice to control the tympanitis. When this dose is not sufficent, it may be increased to twenty drops. If it should materially increase the number of operations or produce strangury, it may be omitted for a while or given less frequently. In the last stage of the disease, if the operations continue thin and offensive, with symptoms of ulcerative action in the small intestines, nitrate of silver and opium in the proportion of one grain of each, may be given every fourth hour with some hope of success. If opium is contra-indicated, extract of hyosciamus may be substituted. I have recently used the elixir vitriol in the advanced stage in doses of fifteen drops every fourth hour, which had a happy effect in changing the character of the alvine evacuations. When the stomach is irritable or the discharges are green and acrid, morphia with small portions of aqua calcis and fresh sweet milk will be of service.

Emollients and Counter-Irritants. The diversity of opinions of medical authors upon the efficacy of these agents is not calculated to prepossess young practitioners in their favor. Notwithstanding blisters are regarded as useless or pernicious by our transatlantic brethren, to whose dicta we are too much disposed to bow with reverence, I am persuaded that when properly timed they are valuable agents, and in negro practice, may say that they are indispensable. A warm poultice sprinkled with mustard or turpentine should be applied to the abdomen every third or fourth hour, or as often as it becomes dry. If the tympanitis and soreness under pressure continue unabated after the pulse becomes soft, and the general febrile excitement has been somewhat subdued by the means before indicated, a large blister applied to the abdomen preceded by an opiate, will give great relief to the patient by staying the progress of the intestinal disease, and relieving engorgement of the liver and spleen. Negroes will generally bear the application in the first week, and it usually heals early and kindly. If the blistered surface should become highly inflamed, which however is rare, unless made too soon, an ointment composed of 1 oz. peruvian bark, 1 oz. simple cerate, and sweet oil q. s. to render it soft, will cause it to heal in a few days. In cerebral hyperæmia and inflammation, after we have accomplished all we can by local depletion, cold applications, and laxatives, the occipital region should be shaved and a blister applied to it. In pulmonary complications, blisters constitute our safest if not our most efficient means, because the usual remedies for pulmonary diseases, such as calomel and antimony, cannot be used with safety, on account of the condition of the bowels. We not unfrequently aggravate the special lesions of this disease by giving medicines internally with a view to cure lesions of the brain and lungs when we might safely rely upon local depletion revulsives and other auxiliaries less pernicious.

Inflammation and enlargement of the parotid glands yield sooner and more certainly to blisters applied early, and followed by warm poultices, than to any other remedy. Quinine, from its importance, deserves a separate consideration, and may be very properly noticed here, as it is our best tonic. Remission is a pathological element so common in the fevers of this climate, that many recent authors are disposed to concede that malarial fever is frequently associated with typhoid in one individual at the same time. If this be a fact, why is it we so seldom see them prevailing together in the same neighborhood? And again, do we not find this element in typhoid fever as common in non-malarial as in malarial districts? A few writers have even gone so far as to attribute some of the plegmasia to malarial origin, because quinine is considered a specific in the one, and exercises a controlling influence over the paroxysms of the other—an assumption entirely gratuitous. Whilst we are not permitted to deny the concurrent operation of these two poisons from the evidence of men capable of judging, we may with propriety say that the presence of this element is no evidence of their co-existence, nor are the beneficial effects of this remedy in typhoid fever any proof of it; for quinine is not a chemical antidote for malaria, but a remedy for certain conditions which may and do obtain in many forms of disease. As a sedative in the early, and a sustainer of the vital forces in the middle and last stages of the disease under consideration, it has no superior, and it is equally applicable to all fevers of an adynamic type. Its beneficial effects in controlling febrile paroxysms are probably inversely proportionate to the amount of phlogistic diathesis present. The idea has often occurred to me that it is a paralytic agent when given in large doses, thus rendering the nervous centres less susceptible to morbid impressions. Whatever may be its modus operandi, the fact must be admitted that it is one of our most reliable sedatives in adynamic fevers, its impression destroying to some extent the habit of recurrence in febrile paroxysms. In addition to this it probably exercises a favorable influence in preventing congestion, inflammation, and softening of the spleen, which is not unfrequently the cause of death in this disease. Where there is good reason to suspect active hyperæmia or inflammation of the brain or its investments, it should be given cautiously, or omitted, until that condition is subdued. As before mentioned, when treating of opium, stupor, with occasional delirium, and throbbing of the carotid arteries, does not always indicate disease of the brain. As an abortive remedy in typhoid fever, I can give no opinion, having never used it in the heroic doses recommended by Dr. Fenner, of New Orleans, to whom we are mainly indebted for this practice. This gentleman has done much towards removing the prejudice that once existed against its use in this disease. It is seldom that we meet with a case of typhoid fever that does not present some abatement or remission, more or less protracted in different cases, at some time of the day, and most frequently in the morning about sunrise, which is the time most appropriate for the administration of quinine. If the febrile excitement is not very high, it may be commenced the first or second day, especially if there is much nervous prostration; otherwise, it may be postponed until the system has undergone some preparatory treatment. From five to eight grains may be given every morning until the system begins to exhibit evidence of prostration, when the same quantity may be given in divided doses through the day. If the tongue become red and angry under its use, or if it produce headache or a sensation of weight at the stomach, it may be omitted for a day or two. When its tonic effect is desired and its use is contra-indicated, one ounce of the infusion of peruvian bark given three times per day, may be substituted with advantage. If the patient has exhausting sweats, fifteen drops of the aromatic sulphuric acid should be added to each dose of the infusion.

Stimulants are sometimes required to sustain the sinking energies of the system, and should be proportioned to the debility. It requires no little discrimination and perhaps a trial to determine when the system will tolerate their use, and which of them will agree best with the patient. Camphor, wine, and brandy are usually preferred. There are some objections to the first that cannot be urged against the last.

Diet.—There is no disease where discretion is more necessary in the dietetic management of patients than in this. They may be allowed to plead their own necessities as to the time of administration, and even to some extent as to quality, but rarely as to quantity. If the case progresses favorably they usually take nourishment after the first week, which should be gradually increased in proportion to the asthenia, with the special injunction to the nurse, if the appetite becomes voracious, never to permit excessive indulgence. This is absolutely necessary in negro practice, for they are usually devoid of all sense of danger from that source. If the patient lies in a stupor, it is sometimes necessary to encourage him to take nourishment. In the first stage, tea, toast, and crackers may be allowed, or what is preferable, rice boiled in fresh sweet milk, with the addition of 1 oz. of gelatin to each pint of the mixture. After the disease has progressed several days, a more nutritious diet may be allowed, especially in negroes, and there is none more harmless than chicken soup with gelatine boiled in it, which may be gradually replaced with other articles suited to the taste and caprice of the patient.

In the last two years, I have treated forty-eight cases of this disease (excluding all concerning which there was any doubt as to diagnosis,) upon the plan here laid down—five whites, and forty-three blacks, of which two died. One of the latter was a weakly asthmatic negro girl, ten years of age, who had broncho-pneumonia, and the other, a young negro woman, who died during the second week, apparently from the ordinary abdominal lesions. She was bled before I saw her, with what effect I could not determine.

The data of convalescence was only noted in a few cases, as many of them were lost sight of after they began to improve, but from the notes before me, the majority must have convalesced by the fifteenth day. Only two were confined to bed over four weeks.

ART. III.—*Additional Remarks on Vesico-Vaginal Fistule and the comparative value of the Clamp and Button Sutures.* By N. BOZEMAN, M. D., of Montgomery, Alabama.

IN some editorial remarks which recently appeared in the American Medical Gazette, and the Nashville Medical and Surgical Journal, a statement which I made in an article on Vesico-Vaginal Fistule published in the May number of the Review in regard to the success of the clamp suture in the treatment of this affection, is not only called in question, but absolutely asserted to be unfounded. This statement was, in effect, that, to the best of my knowledge, the clamp suture of Dr. Sims has failed in as many trials as it has succeeded, or, in other words, that in a given number of operations —not cases—the clamp suture fails in one half. The effect of a positive contradiction from two such sources, although not substantiated by any reference to statistics or facts, being to place me in an unpleasant attitude before the profession, I am compelled in justice to myself to explain the grounds upon which my opinion was based.

I have no means of knowing any thing about Dr. Sims' practice since he left this city, nor do I wish to disparage it in the least. I can only speak of what I saw and knew of his success previous to his removal to New York. For three or four years I assisted him in many of his operations, and witnessed their results. There are also several other physicians in this community who saw even more of his operations than I did; and not one, I venture to say, will deny that I did, in the statement referred to, more than full justice to Dr. Sims.

No one, I presume, who read my paper in this journal with ordinary care, could fail to discover that my object in bringing the button suture before the profession, was simply to present a comparison of its results with those of other methods. The statement as to the clamp suture was made in a general way. I referred to its employment by no one in particular excepting myself. I need scarcely say, this was done from personal friendship to Dr. Sims. I was sufficiently acquainted with the results of his practice, to know that they would not compare favorably with what I had obtained by the button suture, and I could then have produced the same facts in support of this assertion that I am now forced to make public. It appears that the statement referred to, is considered as applying to Dr. Sims alone. As it has been placed upon that footing, I am perfectly willing that it should stand so. I shall be abundantly able to prove, if it becomes necessary, that *not one half* of his individual operations before his removal to New York, were successful.

It will suffice for my present purpose to allude to those cases in which I applied the button suture with entire success, after Dr. Sims' suture had failed in his own hands. The report of two of these (cases I. and II,) is appended to my former article. The former, I mentioned, had been operated upon *once*, and the latter *several times* according to the method of Dr. Sims. Case II., was under his treatment for more than three years, and I am satisfied he performed upon it not less than ten or a dozen operations, several of which I assisted in myself. Upon another case, (Mrs. H., of Auburn, Ala.,) whom I have just cured, he operated twice.

My own experience with the clamp suture amounts to eight operations, six of which were complete failures. Two of these operations were performed upon a case in which Dr. Sims had met with no less than five or six failures. The case was discharged un-cured. There are other cases within my knowledge, upon some of which Dr. Sims performed so many operations that the patients themselves have no recollection of the number. Such is my knowledge of the results of the clamp suture, such the foundation upon which I rested the opinion that the number of its successes did not exceed the number of its failures.

As additional support to the advantages claimed for the button suture, I may here state that since the preparation of my paper referred to, I have performed nine other operations, making in all, sixteen. Of this number, only one partial failure has occurred. This was my twelfth operation, and resulted solely from carelessness on my part, in not giving the button a proper shape. Several of these cases were very interesting. In one, the fistulous opening was about an inch in length, and complicated with a rent in the anterior lip of the cervix uteri. Both fistule and rent were closed at one sitting. This is the second case, with this complication, which has come under my observation; the other I operated upon last year, and may be found reported in the Southern Med. and Surg. Journal for Aug. 1855. So far as my knowledge extends, this is the first case of the kind which has been recorded. Dr. Sims informed me that he had performed the same operation shortly after my report appeared. In another one of these cases, the fistulous opening was nearly an inch and a half in its transverse diameter, and the anterior lip of the cervix formed its posterior border.

The most remarkable case, however, was one in which nearly the whole of the septum had sloughed out. The opening was somewhat of a quadrangular shape, and so large that the superior fundus of the bladder protruded through and appeared at the vulva in the form of a large fleshy tumor. It measured transversely an inch and three quarters, and longitudinally about an inch and a half. The anterior lip of the cervix uteri formed, as in the preceding case, the posterior border of the chasm. Both ureters were exposed to view and seemed to open on the vaginal side of the septum, which appearance resulted from an eversion of the edges of the fistule. The procedure adopted here was to pare thoroughly the edges, and then slit both ureters on the vesical side of the septum to the extent of a quarter of an inch. The object of this was to throw the entrance of the urine into the bladder away from the approximated edges of the fistule. This having been done, the cervix uteri was next brought down and secured to the anterior border of the opening which was immovable. The button used in this instance was semicircular in shape and nearly two inches in length. The sutures, eight in number, formed parts of the radii of a circle whose centre was about half an inch above the os uteri. In no case could the result have been more satisfactory, and a most interesting circumstance was that the cervix and part of the body of the uterus were made to close the fistulous opening.

The stitches in both of these cases were taken in the anterior lip of the cervix, just as though it had been part of the vesico-vaginal septum. I am not aware that an operation similar to these has ever been performed by any one else in this country—at least I have never seen one reported. As to applying the clamp suture in either one of these cases, it would have been utterly impossible with any reasonable hope of success.

ART. IV.—*Cases and Observations in Surgery.* By PROFESSOR GROSS. Reported by S. W. Gross.

CASE 1.—*Nasal Polype.* Wm. Wright, aged 18 years, of Morgan County, Indiana, has been affected with this disease about twenty-two months. It has been attended by the ordinary symptoms, and about a year and a half ago his attention was more particularly called to it by hemorrhage from the posterior nares. He was treated by a practitioner, who from time to time clipped off portions of the tumor, which gave rise to considerable bleeding. The patient sleeps well, but with his mouth open, and is an habitual and sonorous snorer. His respiration is pretty easy, except when taking violent exercise, but it is impeded through the affected nostril. His speech is thick and muffled, and there is some mucous discharge from the nose. The tumor has been subject to frequent hemorrhages. His general health is quite good.

The tumor projects into the fauces from the posterior nares; is of a firm consistence, and of a dark fleshy color; sensible to the touch, but not painful. There is a fullness in the soft palate, upon raising which the tumor is rendered at once apparent. Upon examination with the index finger, it was found to be situated mainly in the right nasal cavity, and attached by a broad pedicle to the posterior margin of the septum of the nose.

The patient being placed in a chair, and his head firmly supported by an assistant, Professor Gross introduced a common chisel, nearly blunt at the point, and a little more than a quarter of an inch in width, into the right nasal fossa, and applying it against the root of the mass he readily detached it from its connections. The operation, which was soon completed, was quite painful, and attended with so much hemorrhage, as to require plugging of the nose. The patient felt somewhat weak from the loss of blood, and, as he suffered a good deal, he was ordered to take a grain of morphia. The plugs were removed on the fourth day. Some suppuration followed; but when the young man went home, ten days after the operation, he was nearly well, and his respiration was as good as ever.

The tumor, after removal, was found to be of a tough, fibrous consistence, the fibres intersecting each other in every possible direction. Notwithstanding the profuse hemorrhage attending its extraction, it seemed to have but few vessels, and the probability, therefore, is, that the bleeding proceeded, in a great measure, from the schneiderian membrane of the nose.

CASE 2.—*Operation for Artificial Pupil.* B. F. Yates, aged 32 years, a stout, robust man, a native of Kentucky, nine months ago received an injury on the right eye by the stroke of a nail. After the ensuing inflammation had subsided, there was found to be a deposit of lymph on the cornea opposite the pupil, and a contracted condition of the iris. These appearances have continued up to the present time. The sight of the eye is very much impaired, the patient being merely able to distinguish light. His system being in a good condition for an operation, a small incision was made with a cataract knife, in the lower margin of the cornea, the incision being carried at the same time transversely across the lower portion of the iris. A small portion of the iris was then brought down to the opening in the cornea, by a delicate hook, and snipped off with a pair of scissors The resulting inflammation was slight, and at the end of four weeks the patient went home enjoying fine vision.

CASE 3.—*Dislocation of the Shoulder Joint.* J. H., aged 26 years, was thrown from his horse twelve days ago, dislocating the right humerus.

The shoulder is depressed, being much lower than the left, and the body inclines to the right side. The arm, lengthened to the extent of about one inch, stands off in a stiff and awkward manner from the body, and cannot be raised to the head. The hand presents midway between supination and pronation. The shoulder is flattened, and there is a hollow beneath the acromion process, which latter is remarkably prominent. The head of the bone can be readily felt in the axilla.

The patient was brought fully under the influence of chloroform, and the dislocation reduced by placing the heel in the axilla, and making extension at the wrist. The head of the bone slipped into its place, with a distinct noise. The limb was then supported in a sling.

CASE 4.—*Bursal Tumor in the Popliteal Region.* Cunard Major, a farmer, aged 29 years, noticed a swelling in the right popliteal space about one year ago, which has been slowly increasing ever since. It gives him but little trouble, is not painful, and does not interfere with his working. No cause can be assigned for its appearance. The tumor is soft, diffused, and of a hemispherical shape, forming a projection on the surface, about the size of a common orange; there is no discoloration of the integuments; no unnatural heat; and no enlargement of the superficial veins. An exploring needle was introduced, followed by a drop of serous fluid. The diagnosis being thus established, a small incision was made into the tumor, and a tent inserted into its cavity. The fluid was of a pale straw color, slightly viscid, and about six ounces in quantity. At the end of a week, the sac being not sufficiently inflamed, the tent was withdrawn, and a seton substituted. The parts soon became painful and swollen, but nearly a fortnight elapsed before it was deemed proper to remove the foreign substance. At the end of this time, the sac had evidently filled up with plastic matter, being solid, and nearly free from discharge. The patient, from the time of the first operation, was kept recumbent, with the limb in a relaxed and elevated position. His diet was carefully restricted, he was freely purged, and, for a while, he was kept under the influence of the antimonial and saline mixture, with anodynes at night. After a confinement of nearly six weeks, he was sent home, perfectly cured. Seven months have now elapsed without a tendency to relapse.

CASE 5.—*Congenital Hare-lip.* The subject of this case was a child, thirty-six days old. The cleft was single, being situated on the left side, and complicated with fissure of the hard and soft palate.

The lip being extensively separated from the jaw, the edges of the fissure were pared with a small scalpel, and united by two twisted sutures, a firm hold being taken with each needle. The upper needle was removed at the end of the third day, and the lip supported by a strip of adhesive plaster, passed from one cheek to the other. The other needle was removed on the fourth day, when the union was found to be complete. As the patient was so young the cleft in the palate was, of course, not interfered with. Hardly any blood was lost during the operation. The child has since much improved, both in flesh and strength.

CASE 6.—*Hydrocele of the Vaginal Tunic.* Lacel, aged thirty-two years, stone-cutter, of Portland, Ky., states that the swelling is of fifteen months' standing, and came on soon after an attack of intermittent fever; his extremities being œdematous at the time of its appearance. The tumor, which is situated on the left side, and about six and a half inches in length, is ovoidal, translucent, compressible, elastic, and the seat of fluctuation. The testicle lies on its posterior aspect at the junction of the lower and middle third. It is not the seat of pain, and no impulse is imparted to the hand in coughing. A delicate exploring needle being introduced, a drop of serum escaped, thus confirming the diagnosis. The tumor was punctured with the trocar, and its contents having flowed off, a counter-opening was made and a seton introduced. At the end of the third day, the inflammation being sufficient to obliterate the sac, the seton was withdrawn, and refrigerant lotions applied to the parts. A complete cure was effected in less than a fortnight.

CASE 7.—*Stricture of the Urethra.—Button Hole Section.* Joseph Mossmire, aged 14, native of Germany, whilst endeavouring to climb a board-fence three years ago, fell upon his perineum. The accident was attended with some contusion and a great deal of pain; for the first twenty-four hours he was unable to micturate, although he had a frequent desire to do so; but at the end of this time, he passed some water mixed with blood. The act was very difficult and painful. During the following three weeks the patient kept his bed, passing bloody urine regularly. For some time after the injury, he was troubled with retention, especially when he took much exercise. For the past year incontinence of urine has been one of his most annoying symptoms, the urine dribbling away constantly throughout the night and day. The stream of urine has been small ever since the accident, and micturition painful and difficult.

On account of the great morbid sensibility of the urethra, chloroform was administered and a catheter carried down to the site of the stricture. This was hard and resisting, and occupied the bulbo-membranous portion of the tube.

Catheters of different sizes were inserted, but the stricture could not be overcome. Some blood followed the operation. An attempt to divide the stricture with a urethrotome proved equally unsuccessful.

A week after the above operation, Prof. Gross believing that a cure could not be effected by dilatation, determined on incision of the stricture. Chloroform having been administered, the patient was placed in the position suitable for lithotomy, and a large catheter passed to the site of the stricture. An incision was then made through the rapbè down upon the end of the instrument, and the knife carried through the obstruction into the urethra beyond it. The catheter was next carried on into the bladder, and confined by tapes.

The stricture was dense and callous, grating under the knife, and was at least three-fourths of an inch in extent. Immediately after the operation, a third of a grain of morphia was ordered, and the same quantity was given some hours after, to allay pain and induce sleep. The patient passed a good night. At the end of twenty-four hours the catheter was removed, cleansed and re-introduced. The wound healed, with the exception of a small point at its superior extremity, by the first intention. The urine passed chiefly through the instrument. For about ten days after the operation, the patient had a slight attack of cystitis, which readily yielded to the ordinary treatment. After the first fortnight, the patient began to introduce the catheter himself, allowing it to remain an hour and a half every morning. At the end of three weeks and a half, the wound had entirely united, and in a few weeks more, the patient went home, with special injunctions to continue the introduction of the catheter for years, gradually decreasing the frequency of the operation. His general health and personal appearance was very much improved, and the stream of urine was as large as ever.

PART THIRD.

Bi-Monthly Periscope.

PHYSIOLOGY.

Experiments upon Digestion;—by *Francis G. Smith, M. D.*, Professor of the Institutes of Medicine in the Medical Department of Pennsylvania College. An opportunity was lately afforded to the writer of examining and experimenting upon Alexis St. Martin, the Canadian, with a fistulous orifice in his stomach; a man whose name is familiar to almost every medical student as the subject of the experiments upon digestion performed by the late Dr. Wm. Beaumont, of the U. S. Army.

It will be remembered that, when quite a lad, St. Martin received the contents of a loaded gun, accidentally discharged. The charge, consisting of powder and duck shot, took effect in his left side, and after tearing away the integuments, muscles, portions of the fifth and sixth ribs and of the left lung and diaphragm, perforated the stomach, creating a wound through which the contents of the latter organ escaped by an orifice large enough to admit the fore-finger. This orifice has never closed, although the surrounding wound cicatrized readily.

The man has enjoyed general good health, and has been the father of a large family, whom he has supported up to the present time, by hard labor.

With one single exception, that of the Esthonian peasant reported by Grunewald and Schroeder, St. Martin is the only instance in which the opportunity of watching the process of digestion, in an otherwise healthy person, has ever been afforded; the case reported by Circaud in the Jour. de Physiologie, so far as we can learn, never having been experimented upon.*

The experiments performed by Dr. Beaumont are so familiar to every student of physiology, that any analysis of them is uncalled for, even if the limits of this journal permitted it. The object of the present paper is merely to detail the results of recent observations, and compare them with those obtained from other sources.

Several questions relating to the physiological action of the stomach may be regarded as still unsettled; among these is that relating to the nature of the acid contained in the gastric juice, and the influence of this secretion upon the various alimentary principles as classified by Prout, to wit, saccharine, oleaginous and albuminous food. The present paper will be devoted to the consideration of these points.

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*Cyc. of Anat. and Phys., Art. Digestion.

It must be premised that the analyses were made upon the fluids obtained from the stomach while digestion was in progress, for that which was withdrawn from the organ while the man was fasting, (that is in the morning, before rising from bed,) was found to be putrescent, although only twenty hours had elapsed after its reception by the writer. The analyses were conducted by the careful hands of Prof. R. E. Rogers, of the University of Pennsylvania, in the presence of the writer, who thus acknowledges the valuable aid received by him.

In every instance, and with all the kinds of food employed, the reaction of the fluid of digestion was distinctly *acid* to litmus paper, while that of the *empty* stomach, as shown by the introduction of test papers through the fistulous orifice, and of the fluid obtained by mechanical irritation was as distinctly *neutral*. The *temperature* of the stomach, while digestion was in progress, was about 100° to 105° Fahr. When empty, about 98° to 99° Fahr.

The fluid for examination was obtained by placing the man upon his right side, and gently introducing a large sized gum elastic catheter, or glass speculum. He was then allowed to turn himself towards the opposite side, when the contents of the stomach would readily flow out. In no instance was food allowed to remain in the stomach longer than two hours. The mucous membrane of the empty stomach presented a pale pink color, as described by Beaumont, with the surface lubricated by mucus; when digesting, its color was deepened, and the peristaltic motion could be distintly seen. During the experiments, St. Martin maintained his usual good health, was in excellent spirits and took his food with appetite.

Previously to the opportunity afforded Dr. Beaumont by St. Martin's accident, specimens of gastric fluid were obtained by means of sponges attached to strings, as was done by Reaumur Spallazini; by exciting vomiting after eating, as recorded by Leipzig; by killing animals while digestion was going on, as was done by Prout and others; or by establishing fistulous orifices in the stomachs of lower animals, as performed by Blondlot, Lassaigne, Bernard and Barreswill, and others since them.

All these observers, from the earliest to the latest, agree on one point, to wit, the existence of an acid reaction in the fluid of digestion; but as to the *nature* of that acid, they differ widely, some contending that it is *organic*, others that it is *mineral;* some that is acetic, lactic, or butyric acid, others that the acidity depends upon the presence of hydrochloric acid, or upon the acid biphosphate of lime. The latter theory, advanced by Blondlot, has been disproved by Dumas, Bernard and Melsens, who have shown, that not only the carbonate, but the basic phosphate of lime, are soluble in gastric juice, as are also zinc and iron, with the evolution of hydrogen gas,—properties which a solution of acid phosphate of lime does not possess.*

The analysis of the fluid obtained from St. Martin by Dr. Beaumont in 1833–4, and submitted to Prof. Dunglison, then of the University of Virginia, showed, as the latter states, the presence of "free muriatic and acetic acids, phosphates and muriates, with bases of potassa, soda, magnesia and lime, and an animal matter soluble in cold water but insoluble in hot." Dr. Dunglison further states, "we distilled the gastric fluid, when the free acid passed over, the salts and animal matter remaining in the retort. The quantity of chloride of silver thrown down was astonishing."†

Previously to this analysis, in 1824, Dr. Prout had made the same assertion as to the presence of hydrocholoric acid, based upon the examination of the contents of the stomachs of rabbits killed while digesting; and Braconnot, in 1835, subsequently to Dunglison, states that he obtained evidences of free hydrochloric acid in gastric juice obtained by sponging the stomachs of animals.‡

More recently, Bernard and Barreswill, Pelouse and Thompson, have been led to believe, from their own experimental researches, that *lactic* acid is the agent upon which the characteristic reaction of the gastric juice depends, and attributes the presence of hydrochloric acid in the free state to the decomposition of the alkaline chlorides by the lactic acid at a high heat. Hence, supposing *lactic* acid to be present in the fluid of digestion with the chloride of sodium, the fluid which passes over by distillation will, *at first*, be destitute of hydrochloric acid; but as the liquid becomes more concentrated and the temperature rises, hydrochloric acid will pass over.§ Lehmann denies the power of hydrochloric acid to decompose the chloride of sodium, but asserts that chloride of calcium is decomposed by lactic acid, even *in vacuo;* and that hence it is not surprising that pure gastric juice should develope vapors *in vacuo*, which, when passed into a solution of nitrate of silver should form chloride of silver.*

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*Phys. Chem., by C. G. Lehman.

† Experiments and Observations on the Gastric Juice, by Wm. Beaumont, M. D., Surgeon U. S. Army.

‡ Annales de Chimie, T p. 348.

§ Carpenter's Human Physiology, Amer. Edit. p. 109.

Still more recently, Messrs. Bidder and Schmidt declare, as the result of eighteen corresponding analyses, "that pure gastric juice of carnivora, after eighteen to twenty hours fasting, contained *free hydrochloric acid only*, without a trace of lactic or any other organic acid; while the gastric juice of herbivora contains, with free hydrochloric acid, small quantities of lactic acid, which may, however, be referred to their more amylaceous food."† Grunnewald's experiments led him to the conclusion that the acid was an organic one; while Schroeder maintains that the fluid obtained by irritating the stomach by peas, owed its reaction to hydrochloric acid.‡

Amidst all this conflict of opinion a reconciliation is scarcely to be hoped for; it is suggested, however, that a portion of it, at least, may be owing to the variety of animals experimented upon, and the question may be asked, whether observations made upon the human subject in the healthy condition, should not be relied upon, rather than those performed upon lower animals, in whom the severity of the operation and the emotions necessarily excited thereby, must unavoidably vitiate the results. The difficulty is somewhat relieved by the fact that only *two* acids are involved in the question, and it narrows itself to the decision as to whether they are both present together, or whether one substitutes the other. The following experiments may serve to decide this question.

May 6th, 1856, at 10, A. M.—Two ounces of dry wheat bread were given to St. Martin, which he masticated deliberately and swallowed. At 12½, P. M., the contents of the stomach were removed by Dr. Bunting in the presence of a number of medical gentlemen and students, and carefully preserved for immediate analysis. The reaction was *decidedly* acid, s. g. 1009. Microscopic examination showed large epithelial cells, mucous corpuscles, amorphous granular matter and starch granules, some broken down, others perfect, together with a few cells of cylinder epithelium.

Experiment 1.—A portion of the fluid thus obtained, was subjected to distillation. In the early vapor that came over, no trace of acidity could be detected by litmus paper; the distillate was neutral, neither acid nor alkaline, and did not precipitate with nitrate of silver. The distillation being carried further, so as to concentrate the material in the retort and increase its temperature, the distillate was found to become acid and a portion being added to a solution of nitrate of silver, a faint precipitate, which was soluble in ammonia, took place. (This experiment has been repeated since, with the material discharged from the stomach, *at will*, after a meal of bread. The distillate became *distinctly* acid, but threw down the faintest precipitate, a mere opalescence, with nitrate of silver. The acid of the distillate gave all the evidence of lactic acid.

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* Phys. Chem. vol. i., p. 93.

† Cyclopædia of Anat. and Phys., part xlvii., Art. Stomach and Intestines.

‡ Dissert. Inaug.

Ez. 2.—A portion of the material from the retort being tested with chloride of barium, gave no visible indication of sulphuric acid.

Ex. 3.—Another portion of the gastric fluid was heated in a poreclain capsule for the purpose of incineration. The vapor that escaped gave no evidence of acidity, but the residue became increasingly acid in proportion as it became more concentrated.

May 9th.—Two ounces of bread moistened with water, were introduced into the stomach, through the fistulous orifice. In an hour and a half the contents were withdrawn. The fluid was very viscid, and presented, as before, a decidedly acid reaction. Some portions of the bread were undissolved, although the greater part had disappeared; sp. gr. not noted. The microscope revealed fewer epithelial cells than in the examination of the previous fluid, some mucous corpuscles and abundance of starch granules, some of which were broken down.

Ex. 4.—A portion of the fluid just obtained was decanted from the bread particles and carefully distilled, without presenting any evidence of acidity to litmus in the fumes. The distillate was acid to litmus, and when tested with nitrate of silver, presented a *very faint* indication of the presence of hydrochloric acid. The residue in the retort, when somewhat concentrated, gave a deep acid reaction.

Ex. 5.—A portion of the same fluid as in Ex. 4, was gently boiled in a retort; the distillate was acid, and when tested as before, gave the same faint evidence of the presence of hydrochloric acid. The residue, when taken from the retort and examined with litmus, was found more acid than before the distillation. It was then carefully evaporated and examined from time to time, with the effect of manifesting a constantly increasing acidity so long as it remained liquid. The heat was then carried still further, so as to dry but not char the material; on moistening it with water it was found even more intensely acid. Heat was again applied and carried to *incipient* charring, and then the material was moistened and tested again, exhibiting a *diminished* acidity. The same experiment repeated and carried to increased charring, showed, on moistening the residue, a still diminishing acidity, and on heating the residue to thorough charring and until all empyreumatic odor ceased to be given off, it was found that *all* acidity had disappeared.

Ex. 6.—It was suggested that the acid reaction of the residuum might be due to phosphoric acid, and that it might have been decomposed by the heat employed and the carbon which was present. To determine this, another portion of the same fluid was mixed with three drops of a solution of phosphoric acid, and the mixture was carried through the same series of experiments, giving a successively increasing acidity, with this peculiar result, however—that even after the whole material had been thoroughly charred, as before, and still more highly heated, the acid reaction still remained, thus demonstrating that the acid detected in the product of digestion in the first experiments was *not* the phosphoric.

Ex. 7.—To ascertain whether hydrochloric acid, if present in the free state, could resist the distilling heat and remain in the residuum when concentrated, a minute drop was added to a quantity of water so large as to render its reaction undetectible by litmus; and a like quantity to the fluid of digestion, and both were distilled. In both cases, a *very* distinct evidence of the presence of the acid was obtained in the distillate by a decided precipitate with nitrate of silver.

Experiments 6 and 7 go to show that the acid of the gastric juice, that at least upon which its most decided action depends, is not phosphoric acid, for it does not resist high heat, as that acid is known to do. It is probably not hydrochloric, nor acetic, for these are both highly volatile and are detected readily in the distillate by nitrate of silver.

Ex. 8.—This experiment was performed in verification of the doubt just stated, that hydrochloric acid is not present in the free state in the fluid of digestion. A portion of all the digestive fluids obtained from St. Martin, and a quantity vomited at will by another individual, were tested with pure deutoxide of manganese, without giving the slightest trace of the presence of chlorine.

Another portion of the digestive fluids was carefully filtered, and a minute trace of chloride of calcium added to it; the material was then tested with oxalic acid, when immediately the white precipitate of oxalate of lime took place. Had any free hydrochloric acid been present, it would have prevented the appearance of the precipitate by dissolving it. To prove this, another portion of the same gastric fluid was filtered, and a minute quantity of hydrochloric acid and chloride of calcium were added to it. The addition of oxalic acid now produced *no* precipitate. (See Lehmann's Phys. Chem. p. 93, vol. i.)

It thus became a demontration that the strong acid reaction of these gastric fluids was not due to the presence of free hydrochloric acid. It seems equally clear that it was an *organic* acid, from the fact that it was destroyed by heat, as in Ex. 5; and almost certain that it was lactic. To decide this doubt, a portion of the distillate and another of the residue in the retort were tested with zinc, as recommended by Lehmann, (Pys. Chem. p. 92, vol. i.,) with the effect of producing the characteristic crystals of *lactate of zinc*.

It will be remembered that in experiments 4 and 8 a faint evidence of the presence of hydrochloric in the distillate was manifested by the reaction with nitrate of silver. It will also be remembered, that Bernard and Barreswill assert that this hydrochloric acid is due to the decomposition of the alkaline chlorides at a high heat. To ascertain this the following experiment was performed:

Ex. 9.—Lactic acid was mixed with chloride of sodium, and the two were heated in a retort. The distillate gave the *faintest* possible trace of opalescence when treated with nitrate of silver. This evidence can scarcely be relied upon, for the solution above described required so high a temperature to produce ebullition, that it was difficult to prevent a spurious distillation of the chloride of sodium along with the vapor, and from this, it is believed, arose the opalescence in the reaction between the distillate and nitrate of silver. If lactic acid can decompose the chloride of sodium, it can only be in very small amount; *chloride of calcium*, as Lehmann has shown, can be decomposed by lactic acid, and if this be present in gastric juice with lactic acid, we may have hydrochloric acid developed by distillation.

May 8th.—A meal of roast beef, with a small portion of salt as a condiment, was given to St. Martin at 2 P. M. At 3½ o'clock of the same afternoon the contents of the stomach were removed. The fluid was viscid, inodorous, presented a floculent deposit and a marked acid reaction; s. g. 1008. The microscope revealed numerous epithelial cells from the mucous membrane of the mouth downwards as far as the stomach, mucous corpuscles, amorphous granular matter, oil globules in great abundance, and transversely striated muscular fibres, in some of which the sarcolemma was softened and ruptured, and the sarcous elements just liberated.

The gastric fluid was carried through the same series of experiments as those to which the product of bread digestion was subjected to, and with a like result. The distillate was distinctly acid, but gave very faint traces of hydrochloric acid. The residuum became most intensely acid as it was concentrated, and the presence of lactic acid was manifested, both in the distillate and the residuum, by the test of the characteristic crystals of lactate of zinc.

From the preceding experiments the following conclusions are fairly deducible:

1st. That the secretions of the stomach when digesting are invariably acid.

2d. That the acid reaction was not due to the presence of phosphoric acid.

3d. That *if* hydrochloric acid was present, it was in very small quantities.

4th. That the main agent in producing the characteristic reaction was *lactic acid.*

It is but just to say that the experiments were conducted with the utmost care and precision, with a single eye to *truth*, and not with a view to support any favorite theory of digestion. So far from this, it may be stated, that the results arrived at are at variance with the doctrines maintained by the writer for many years. Each experiment was repeated several times, so as to leave no room for doubt, and was carefully compared with the results obtained by examination of the fluids discharged at will by another individual.

It is true that this is only one series of observations, and the first that has been published, so far as St. Martin is concerned, since the analyses of Dunglison and Emmett: and now that he has again become a subject for experimentation, perhaps other and different results may be obtained. There may be sources of fallacy, unknown to the writer at the time, which may vitiate the conclusions arrived at; if so, they will be abandoned as readily as those formerly maintained.

> Si quid novisti rectius isti, candidus imperti;
> Si non, his utere mecum!

Medical Examiner, July 1856.

SURGERY.

1. DISCUSSION BEFORE THE NEW YORK ACADEMY OF MEDICINE ON THE SUBJECT OF UNUNITED FRACTURES.—Dr. Detmold stated the causes of non-union to be both local and constitutional; but sometimes no cause could be assigned. The old method of causing union was to excite inflammation between the fractured extremities by friction, blisters, the seton, &c. Resection and wiring the ends together, was another mode. Dr. D. stated that Dr. Mott's cases (where the seton had been employed) were only successful where it had been necessary to *drill*, in order to introduce the seton; and he thinks that Dr. Mott was misled in this way. Dieffenbach resorted to drilling and fastening with ivory pegs. Five years ago Dr. D. had tried boring with a common gimlet, and was successfull in all cases. A committee from the

Academy had seen one of these operations. This method was afterwards claimed by a Western surgeon (Dr. Brainard).

Dr. Buck referred to the local conditions preventing union, such as portions of muscle or tendon getting between the ends of the bone. Dr. B. gave the history of a case in which union of the humerus was prevented in this manner. In the tibia and fibula it is sometimes almost impossible to keep the upper fragment of the tibia in place, and the union of the fibula often kept up this difficulty. Dr. B. spoke of Malgaigne's apparatus for overcoming this displacement. He had both failed and succeeded with both seton and exsection. The perforating method was generally successful in about twelve weeks. Friction was useful where the cases were not of too long standing.

Dr. Detmold stated that he had been successful with the perforating method, where Dr. Buck had failed with the seton. He had also been very successful in a fractured ulna after the third trial. One great advantage of the perforating method was that it leaves no unpleasant symptoms. He had often operated at his office, and allowed the patient to go home. Another advantage was that it could be repeated any number of times; another, that it does not shorten the limb. He repeats the operation in one week, if no union has taken place.

Dr. Buck stated that he introduced the seton, in a case, by means of perforating, and union followed; but afterwards it was again broken, and the patient came under the treatment of Dr. Detmold.

Dr. Parker considered this question important for all practitioners, as it often occurred when no cause could be assigned for it, when there was no fault on the part of the surgeon, and was often the basis of malpractice suits. In non-union of the lower extremities of hospital patients he used the starch bandage, recommended all possible use of the limb, together with good diet, fresh air, and stimulating drinks. *Excision* (as introduced by White, of Edinburg, in 1760, and improved by J. K. Rodgers, of this city, by wiring the ends together) was often successfully employed. *Electricity* is useful; he knew of one case treated successfully by this agent. Dr. P. had noticed that operations on the upper extremities were followed with less success than on the lower, and asked for an explanation of this. He had been unsuccessful with the drill; and asked if any benefit was derived from leaving the chips or borings in the hole. He thought there might be.

Dr. Detmold agreed with Dr. Parker that these bony particles, or debris served as a nucleus for the new union.

Dr. Stone thought that in these cases of fracture it was especially important to ascertain whether the case was one of *delayed union*, or one of *true false-joint*, where the bones were covered with cartilage, and where a new synovial capsule existed. In the upper extremity, particularly in the humerus, false joints were not uncommonly found, and the fractured extremities, if oblique, could not be readily approximated. In such cases he did not believe the operation by the gimlet, as proposed by Dr. Detmold, would be likely to succeed, or that any operation promised success unless it had for its objects the removal of the cartilage and destruction of the capsule, and the approximation of the broken extremities to each other. In the lower extremity, especially in fractures of the tibia, it was extremely rare to meet with cases of false joint. He (Dr. Stone) had never met with a single instance, and was disposed to regard them rather as cases of *delayed union*, which would readily unite if a very little inflammation could be excited. Dr. Stone would expect to obtain this result by the repeated application of blisters; others, by rubbing of the bones together; but Dr. Detmold, by boring with a gimlet. This suggestion of Dr. Detmold was a useful one; but in the fact of union taking place in a week, it proved that very little inflammation was necessary. Dr. Stone had been on the Committee who investigated Dr. Detmold's cases, and had then come to this conclusion. As to the idea that the dust or debris contributed to the union, he must confess that it seemed to him to be truly fanciful; he should suppose that the dust must necessarily be removed in abstracting the gimlet; or, on the supposition that it might possibly be left behind he should regard this as an untoward accident, which would be likely to act as a foreign body and produce abscesses.

Dr. R. S. Kissam remarked that he was successful in one case of non-union of the humerus, by means of the starched bondage.

Dr. Batchelder remarked that fractures are solutions of continuity in the bones, which heal in the same way as do like solutions of continuity [wounds] in the soft parts, i. e., by the first or second intention. When the fractured extremities in simple fractures are brought and kept in apposition, the lacerated vessels, pertinent to the bone in the immediate vicinity of the fracture, inosculate, and union by the first intention ensues, as in wounds in the soft parts; with this exception, that the earthy matter which immediately surrounds these vessels at the place of fracture must be first absorbed. This preliminary step is accomplished in a longer or shorter time, according to the age of the patient, or size of the bone. When the crepitus ceases to be perceived, it is an indication that the absorption of the earthy matter is nearly or quite completed; and as motion at the place of fracture diminishes, we infer that re-union is progressing about in proportion to the diminution of abnormal motion; so when this motion has ceased, the inference is that union has taken place, and that the process of re-deposition of ossific matter among and around the vessels, has begun, or will soon begin, and continue till callus is completely formed, provided the fractured parts are kept in position and motionless. If much motion be allowed, the newly formed vascular union will be broken up, and the re-union will be prevented, and the process have to be gone over with again. When the parts are much disturbed and the union repeatedly broken up, the vessels, thus foiled in their attempts to repair the injury, refuse to renew their efforts; but uniting with the periosteum, form a ligamentous union, which, while it serves as a connecting medium between the ends of the bone, keeps them asunder and prevents bony union. To get rid of this interposed ligamentous substance, and cause absorption of the earthy matter surrounding the vessels in the immediate vicinity of the fracture, is the first object which surgery should aim at as essential to the cure. In the larger bones this ligamentous union is very spicuous, and is most perfect in cases of ununited fracture of the neck of the femur. In these cases, the capsular ligament is folded in between the fractured surfaces, and acts in the first instance as an extraneous body which tends to prevent osseous union, but which in the end contributes mainly to that which is ligamentous. The objects to be aimed at in all our endeavors to cure ununited fracture are, 1, to get rid of this interposed ligamentous substance; 2, to promote or effect the absorption of the earthy matter which surrounds the vessels at the broken ends of the bone; 3, when this is accomplished, to bring and keep these ends in apposition, that the vessels thus prepared may inosculate and unite as they should do, and probably would have done in the first instance if they had had fair play, or if there had been no fault in the patient's constitution. The method which Dr. B. has adopted and practised, (with few exceptions in favor of the starch dressing) is to wind a bandage firmly around the affected limb, in order to prevent swelling below the part to which the appropriate application is to be made. This done, a piece of thick sole-leather soaked in water until perfectly soft and pliable, cut and fitted exactly to the limb, and long enough to reach from joint to joint, and sufficiently large to cover the whole, is to be applied and bound firmly on with a bandage. While this dressing is being consolidated, great care must be taken to put and keep the fractured extremities in perfect apposition, or as nearly so as possible, which is best accomplished, when the lower extremity is the affected member, by relays of assistants, who will hold the parts *in situ.* When this dressing has become dry and consolidated, measures should be taken to make the lower fragment press firmly against the upper. As nothing in the system can resist pressure, and newly-formed parts yield readily to its influence, the interposed ligamentous substance of which we have spoken, and also the earthy matter immediately surrounding the vessels at the fractured ends, are soon absorbed, and the vessels which have been thus freed of osseous matter will unite, and the union be re-established. In case of a lower extremity, it may be proper to let the patient get up and move about with the help of crutches, and perhaps bear more or less weight upon the foot, taking care to do it in such a way as to cause as little motion between the fractured ends as possible; especially after a short time, as motion, if kept up, would infallibly prevent union. If it be the humerus, the patient should be confined to his bed, and an apparatus, besides the rubber splint, be so contrived and applied as to draw the lower fragment up, and force the fractured surfaces to press firmly one against the other, which cannot be so well done in the erect or sitting posture as in the recumbent. This bone (the humerus) is the one in which the artificial joint most frequently occurs, and in which the usual methods of cure have most signally failed. In reflecting upon these facts, it has occurred to Dr. B. that both these accidents were to be imputed to our mode of treating these fractures; splints are firmly bandaged on, which, with the weight of the limb below the fracture, prevent the muscles drawing the lower fragment up, and causing it to make the requisite pressure against the fractured end of the upper piece—in which opinion he has been fully confirmed when, finding at the end of several weeks there was no union, the impending evil has been immediately obviated by applying an apparatus which caused the fractured ends to press one against the other. He believes that this method of treatment will effect a cure in most cases of ununited humeri, even of long standing.

In compound fractures, union takes place by the second intention, which does not usually commence, or is not appreciated, until the external wound is nearly or quite closed. Dr. B. remarked that the starch bandage, the gutta percha splint, and probably the gypsum bandage, as recommended by Dr. Mathysen (which he had never tried) will, no doubt, be found better than the leather splint, which was resorted to many years before any thing was known of even the starch bandage, or the "dextrine," as recommended by Prof. Van Buren.

Dr. Batchelder exhibited a specimen from Dr. Finnell's collection, of ununited fracture of the radius and ulna, which beautifully illustrated the manner in which the ligamentous union is formed.

Dr. Finnell remarked that the man to whom the ulna and radius referred to by Dr. Batchelder, belonged, had good use of his arm. In St. Vincent's Hospital he had often found it necessary to use stimulants freely. He approved of electricity.

Dr. Phelps observed that all present must conclude that the main point in practice was to secure a certain amount of inflammation in the ends of the bone before union could be produced.

Dr. W. Parker said that the question seemed brought to two points: 1. Where there is union by ligament; and 2, where there is a false joint. So long as the inflammation is mild, there is no union. Again, there is such a thing as too much inflammation. Diarrhœa, lactation, burns, suppuration, &c., may prevent union. A physician of this city, who had a fracture and an injury of the brain, was severely salivated, and no union took place until the salivation ceased, at the end of thirteen weeks. The system must be brought to the ordinary standing point, by correcting it if deranged, and bringing it to a proper tone. But in a false joint, an operation must be performed.

Dr. McNulty presented an instrument for the purpose of introducing a platinum wire between the ends of an ununited bone, by means of which he proposed to pass a galvanic current to act as a cautery, and thus produce inflammation and union. Dr. McN. was requested to give the history of the cases in which he might try it.

2. VESICO-VAGINAL FISTULA. SUCCESSFUL OPERATION. By *Frank H. Hamilton, M. D.*, Buffalo.—Mrs. ———, æt. 45. The fisula was produced nearly eight years ago, in her first labor. Forceps were employed.

The opening was at the usual place, just above the pubes, and about two inches from the vulva. Its shape was oval, with its longest diameter transverse. Its size was such as to receive easily the end of the index finger. At the upper end of the vagina a thin septum traversed the passage, leaving a small opening through which the menses could escape. She had ceased menstruating nearly a year before.

I gave her chloroform, and assisted by Dr. Eastman, I removed the edges of the fistula very freely. This part of the operation was made partly with strong scissors, but chiefly with a large bistoury. When the incisions were completed the opening was much larger than before, and the abraded surfaces were extensive. When the bleeding had ceased we closed the wound with four strong, silk sutures, each suture being introduced free from the margin of the opening, and being made to penetrate deeply. Most of the sutures were introduced by the aid of a reversed needle, attached to a long handle.

During the operation the patient rested upon her back, but as soon as it was completed, she was laid upon her belly, and a short flexible metalic catheter introduced, bent into the shape of the italic letter *s*.

During forty-eight hours this position, always a very tedious one, was steadily maintained. After this she was permitted to lay upon her side and even occasionally to sit up. On the seventh day three of the sutures were removed, and on the tenth the fourth and last was removed. On the same day, also, the catheter was discontinued.

The success of the operation has been complete, so that on the tenth day she passed her urine voluntarily, and retained it also without inconvenience. Not one drop has passed through the fistula since the operation was made.—*Buffalo Med. Journal, Aug.* 1856.

3. **Vesico-Vaginal Fistula.** By *H. R. Robards, M. D.*, Memphis.—The two cases of Vesico-Vaginal Fistula are reported not with the view of throwing any additional light upon the distressing affliction, or of adding any new operative procedure for its relief. But as various modes have been recommended by different surgeons, all possessing more or less merit, it may be well to report at least the result of any practical operation in every case, so that the advantages and disadvantages may be seen by those who have no special partiality for any particular operation.

The one so generally and favorably known at this time as Dr. Marion Sims', in many respects possesses advantages so greatly superior to any other, that however it may be modified, I presume there are few intelligent surgeons who would not adopt at least his plan of bringing the parts into view, and the general principles that he has recommended.

The first case was that of Mrs H. of this county. A healthy married lady, about 20 years of age, who had fistula, produced in the usual way, with the first child, to wit: protracted labor, pressure, violence, sloughing, &c. About six months standing, immediately above the neck of the bladder transverse 1¾ of an inch in length, and ½ an inch wide. The vagina, neck and mouth of the womb healthy, and the edges of the fistulous opening not so thick and indurated as usual, consequently it was a favorable case for an operation. Dr. A. K. Taylor and myself performed it without the slightest difficulty after Dr. Sims' plan. The lady left the city two days after the operation, and we did not see her again for more than a week, when the sutures had cut their way out and been lost. There was an opening left through which a common size silver probe could readily pass, and through which the urine dribbled. A single suture and two short clamps were sufficient to complete the cure in five or six days more.

The next was that of Mrs. S., of Mississippi, about 23 or 24 years of age, rather fleshy and of a lymphatic temperament. The fistula was situated higher up in the vagina and the edges thicker and harder than the other. The general health of this patient had also suffered more, the nervous system being very much shattered.

The induration of the edges was so great as to blunt the edge of our best knives, and had a cartilaginous appearance. The clamps were applied in the same manner as in the other, except that the precaution was taken to include a larger portion of tissue between the clamps, as ulceration and sloughing was feared in consequence of the contracted and unyielding nature of the parts. After the operation had been completed, the permanent catheter was introduced as usual, but she found great difficulty in retaining it. Cold applications were made and strict rest enjoined. Examined the next day—no urine was discovered to escape, and the case seemed progressing favorably. The next or the third day—symptoms same, urine passed through the urethra. On examination however, one of the clamps seemed buried too deeply in the tissues, and ulceration was going on to some extent, still we hoped to accomplish adhesion before any serious damage could result from that cause. On the fifth day the clamps had to be removed, adhesion was found to have taken place, but the clamp on one side had ulcerated through the coats of the vagina and bladder, the consequence of which was another fistulous opening, not so large as the other had been, but just as inconvenient. Another operation was performed as soon as the integrity of the parts had been sufficiently restored to authorize it, and great care was taken to adapt the force put upon the sutures to the predisposition to ulceration, and the soft sloughy character the tissues had now assumed. Only enough was used to insure perfect coaptation, and the sutures were entered and passed out into sound tissues. Notwithstanding all of which, and close watching, the same result followed.

A third operation, and I believe a fourth met with no better success. The weather being exceedingly hot, we advised the patient to postpone any further attempt at a cure until the weather was more favorable, and the integrity of the parts had been more thoroughly restored.

The operation in this case, I regard as only a partial failure, and whatever there was of failure is owing, in my opinion, to the only objection that can be urged against the operation, and that is the liability to ulceration caused by the pressure of the clamps; but how that difficulty is to be remedied, unless it be by making the clamps wider, somewhat after the manner of the suture, lately recommended by Dr. Bozeman, of Montgomery, Ala., I cannot tell. The operation of Dr. Bozeman is plausible, and under existing circumstances I shall be disposed to try it the first case, I have, believing however that two buttons will answer better than one, and that the same objection may be urged against this, as has been against Dr. Mettauer's, that the sutures themselves are liable to cause ulceration and cut their way through before adhesion has taken place. Indeed with the exception of the protection which the button affords to the edges, the plan of Dr. Bozeman possesses no advantage over Dr. Mettauer's in my estimation. As to the manner of bringing the parts in view, and the general principles of the operation, there can be no doubt but that Dr. Sims is entitled to the merit of first making the operation practicable, and that whatever imperfections it may possess, will yet be remedied by his inventive and ingenious mind. The cases reported by Dr. Bozeman, treated on his plan successfully, are remarkable, and even if it should prove less successful in other hands, entitle him to much credit for those he has treated.—*Memphis Medical Recorder*, *July*, 1856.

4. FACIAL FISTULA. By *J. D. White*, M. D., Philadelphia.—We are induced to give a few cases of fistulæ, which were produced by the roots of teeth, inasmuch as a great number came under our own observation after they had been treated for a long time by good medical or surgical practitioners.

External incomplete fistula may occur in the face from many causes, such as diseased bone, lodgment of foreign bodies, or teeth in which the pulps have been for a long time dead, &c. When first we came into the profession, we always thought it " a feather in our cap " to treat such a case after it had been unsuccessfully treated by a medical man. We supposed that a medical practitioner who failed in treating such a case, belonged to the lower order of the profession; but we have lived long enough to find that the best in it are constantly liable to fail, or to give an erroneous diagnosis in the same kind of cases. We have never yet met with a medical practitioner who was fully satisfied that it was only roots of teeth in which the pulp was dead that produced *alveolar abscesses*, and that they may open through the gum only, or through the face externally.

CASE I. Miss ———, about seventeen years of age, presented herself to ask advice about a fistulous opening on the apex of the chin. She was being treated at the time by an *herb doctress*, who agreed with a number of medical men who had been consulted, that it was *cancer*. This doctress intended, after the "*roots were dead, to pull it out;*" and showed the fair patient a number of similar ones with long roots, put up in jars, to illustrate the usual success of her treatment.

CASE II. A young lady, Miss ———, about twenty years of age, was brought to us by one of the most distinguished medical men of this city. He submitted the case to us to know whether it was a "medical or surgical case," as he had been treating it for about eleven months. He had tried everything in the materia medica, that he could think of, and to no avail. He said, as there were two openings, one on the top of the gum, in the location of the wisdom teeth, and one on the neck, about an inch below and opposite the angle of the inferior maxilla, he could not account for this state of things; both openings had been treated with caustic, and syringed out with various substances, but still showed no signs of healing. We believed the opening on the top of the gum, which was small, to be produced by the gum which had contracted over the root of the wisdom tooth, which had been broken off in attempting to extract it, and that the external opening was the alveolar abscess opening outside. The patient, however, protested against this, that she was sure that the tooth had been extracted entire, and that the dentist showed her the *whole* tooth. This was not the first time that we had been told by patients that the dentist had shown them *a whole tooth* to prove that they had succeeded in extracting, when they were only broken off, and therefore we were prepared for the case. We cut down through the gum freely, and extracted a large root of the wisdom tooth, after which the external opening closed in a few days without any further treatment.

CASE III. A young lady, Miss ———, over twenty years of age, was presented to us by her father, an eminent medical man of our city. She was attacked with an enlargement of slow and not painful growth, in the region between the canine fossa and the infra orbital foramen of the right side, accompanied by a slight flush on the cheek. Finally a tumor was discovered, of some size, deeply seated in the cheek, which could be approached from the inside of the lip. An eminent surgeon was called in consultation, and it was pronounced a *melicerous tumor*, which it was advised should be cut out, and which was accordingly done. It was dissected out from the inside. We were told that the whole of the "*sac*" was removed, and a portion of the mucous membrane also cut away, and the parts touched with caustic, to promote a speedy union; but it did not succeed. We believed that it was caused by the second bicuspid, of which the pulp had been a long time destroyed, It was extracted, and the parts healed up speedily and kindly.

CASE IV. Mrs. ——— called to see us, to obtain an appointment to have some operations upon her teeth. We at the time observed an opening in her cheek, left side, immediately below the infra orbital foramen; it presented a purpled hue, raised somewhat above the healthy surface, with a depression around its border, between the healthy and unhealthy parts. A little serous pus was percolating through the whole surface of the diseased part. We immediately asked the patient to sit down, and we would remove the teeth at once, instead of waiting until the time of her appointment. She was very much surprised, and answered that she did not want any teeth extracted, only plugged. We remarked, however, that it was necessary, to cure her face. She expressed much more surprise at that, as the disease in her face did not depend upon a tooth; that it had been there for about two years, and had been treated by her medical adviser, and two surgeons had been consulted about it, and they had come to the conclusion that it must be cut out, as it was cancer, or would turn to that if it was not already; and she had made up her mind to have it done. We assured her that the second bicuspid tooth in which the pulp had been dead, as we ascertained, for about eight years, was the cause of the difficulty. She had the tooth extracted, and the parts healed up in a short time. In this case, it had never been suspected that a tooth was the cause of the ulceration in the face. This patient's health had been much impaired by the anxiety of mind and the medical treatment she had undergone, and the low diet to which she had been for so long a time restricted.

CASE V. A middle aged lady, Mrs. ———, was sent to us by a medical gentleman of high standing; she had been treated before applying to him by a surgeon, for *lachrymal abscess*, for about three months, but without any signs of improvement. We found that the second bicuspid tooth of that side was dead; there was no cavity of decay, but it was blue, and had a black spot on either side. This tooth was extracted, and when broken open the black spots of both sides stained the tooth entirely down to the pulp cavity, which was filled with a fœtid pus. This case was complicated with disease of the antrum, but the parts became entirely healthy in a short time. We might well exclaim here, how can these things be in this enlightened age of medicine? We have given here but five cases, each varying a little in their character, but we could readily add an hundred. These are cases which demand from the medical profession more attention to the teeth, and from the dental, a much closer study of the diseases, which generally come under the head of surgery.—*Dental News Letter*, July, 1856.

5. ON WIRE SPLINTS. By *J. C. Nott, M. D.*, Mobile, Ala.—I have recently been using in fractures of the extremities *wire splints*, which I do not recollect to have seen recommended elsewhere, and which possess manifest advantages over those of any other material heretofore used.

The objections to wood, pasteboard, gutta percha, and other solid materials, are that they keep the inflamed parts too warm, and *do not admit the application of cold water.*

The "*wove wire*" is the lightest material out of which a firm splint can be made, and being malleable, may be moulded with the fingers to the shape of the limb.

Being porous, no obstruction is offered to the entrance of cold lotions, and the parts may be subjected, if necessary, to a stream of water.

The material out of which these splints are made is easily procured and easily cut into proper shapes. The hardware stores all keep what is called "*wove wire*" of various qualities, coarse and fine, and with a pair of strong shears it is readily cut into any form we may desire. The edges should be turned over to prevent the wires from sticking into the flesh, and to give more strength to the splint. It is well also to give them a coat of asphaltum or other varnish, to keep them from rusting. The material does not cost more than from fifty cents to one dollar a yard.

Suppose for example, we have a common fracture of the bones of the leg. Two splints of the proper shape are selected, and being well padded with lint or old soft rags, they are applied on each side of the leg, and nicely moulded to its shape. A bandage is then rolled from the toes up to the knee over it, or what is more simple, pieces of bandage are tied around at short spaces from toes to knee. We at once have a solid fixture, having all the advantages and none of the inconveniences of the starch bandage, and the patient may move the limb about as he pleases, or get up on crutches.—*Amer. Jour. Med. Sciences, July*, 1856.

6. **Escape of Great Vessels by their Elasticity, from Balls.** By *G. H. B. Macleod.* There is no circumstance in gunshot wounds which is more striking than the wonderful way in which the great vessels, by their elasticity, escape from the ball in its transit. Thus bullets innoculously traverse parts where one would suppose a pin's head could not be placed, without wounding a vessel. True, the fact that such cases remain to be seen, results from the vessel not having been opened, and we do not know in how many cases the result was not so fortunate, but still, viewed merely as happy escapes, they are curious and interesting. In the course of the femoral vessels, this phenomenon is particularly common. Through the axilla, through the neck, out and in behind the angles of the jaw, between the bones of the forearm and leg, balls of every size often take their passage without harm to the vessels. Take the following cases as examples: A soldier was wounded at Inkerman, by a ball which entered through the right

cheek and escaped behind the angle of the left jaw, so tearing the parts that the great vessels were plainly visible in the wound. Three weeks after, he was discharged without having had a bad symptom. A soldier of the Buffs was struck in June last, when in the trenches, by a rifle ball, in the nape of the neck. It passed forward round the right side of the neck, up under the angle of the inferior maxilla, fractured the superior maxillary and malar bones, destroyed the eye, and, escaping, killed another man who was sitting beside him. This man made a recovery without a bad symptom.

A French soldier at the Alma was struck obliquely by a rifle ball, near, but external to the right nipple; the ball passed seemingly right through the vessels and nerves in the axilla, and escaped behind. His cure was rapid and uninterrupted. Endless numbers of similar cases may be seen in any military hospital.—*Edinburg Med. Journal, May*, 1856. *Am. Journal Med. Sciences, July*, 1856.

7. RADICAL CURE OF HYDROCELE. A man, aged 31, has recently been under Mr. Lloyd's care, in St. Bartholomew's, on account of a hydrocele, which had been several times tapped, and on one occasion treated by the injection of iodine, with the hope of permanent cure. The latter expedient, however, had failed, the sac having refilled. Mr. Lloyd adopted a plan, which has long been a favorite with him, of introducing a little of the red precipitate into the sac. The fluid having been drawn off by a canula large enough to allow a director to enter it, the latter instrument, oiled, and then dipped in the powder so as to carry a few grains adhering to it, was introduced and moved about in the cavity. The introduction was repeated two or three times; some inflammation followed, and a perfect cure ensued. The practice has the advantage over that by injection of not requiring any special apparatus. Mr. Lloyd believes it also to be more uniformly successful.—*Med. Times and Gazette, April*, 1856.

8. NEW FORM OF ASTRINGENT APPLICATION. By *Dr. Wm. Bayes*, Brighton.—Pure glycerine dissolves nearly its own weight of tannin, affording a very powerful local astringent application.

The solution of tannin in pure glycerine appears to me to supply a desideratum long felt, and capable of a great variety of useful applications.

The solvent property of glycerine over tannin, allows us to form a lotion of any desirable strength, as the solution is readily miscible with water.

The solution of tannin in glycerine, in one or other of its strengths, is peculiarly applicable to many disorders of the mucous membrane, readily combining with mucus, and forming a non-evaporizable coating over dry membranes; hence it may with benefit be applied to the mucous membrane of the eye and ear in many of its diseased conditions. It forms a most convenient application to the vaginal, uterine, urethral, or rectal membranes, where a strong and non-irritant astringent lotion is desired.

In local hæmorrhages, where the bleeding surface can easily be reached, it will prove very convenient, and may be applied either with a sponge or small brush.

The solution must be kept in the dark, and should not be prepared for any great length of time before using, or decomposition will occur.

It is singular that glycerine does not possess the same property towards gallic acid.—*Association Med. Jour.*—*Charleston Med. Journal, June*, 1856.

9. A Large Salivary Calculus.—Our friend, Dr. P. D. Hughes, of Bryne, Tennessee, sends a remarkable calculus, measuring $1\frac{4}{10}$ inch in length, and $1\frac{1}{10}$ inch in its greatest circumference, and composed, undoubtedly, of phosphate of lime. He writes: "The negro man from whom it was obtained had been afflicted with disease of the throat for some ten years, and had been treated externally with cayenne and other stimulating gargles; and the other day while searching with his fingers near the root of his tongue caught hold of and extracted the specimen here sent you." It might have been derived from the tonsil or even the sublingual gland.—*Nashville Journal, July*, 1856.

10. Compression of the Brain from Effusion—Trepanning—Recovery.—Reported to the St. Joseph Medical Society, April 1st, 1856. By *G. C. Catlett, M. D.*—On the 20th of December, 1854, Mr. W——, while engaged in a fight, received on his head a severe blow with a stick, that would have measured at least two and a half inches in circumference at the largest extremity. The blow terminated the affray, having prostrated W——. There soon followed syncope, nausea and vomiting. After recovering from these symptoms somewhat, he re-mounted his horse and rode three miles to his residence. On reaching home, he took his bed, complaining of great oppression and nausea. Soon vomiting re-occurred, and laborious and stertorous breathing rapidly supervened. His wife becoming alarmed, sent in haste for Dr. Knode—upon his arrival about four hours after the accident, and after ascertaining the character of the case, he had the late Dr. Sykes called. W—— received the stroke about 12 o'clock, M. When I arrived about six hours after, Drs. Knode and Sykes had cut down

upon the skull, making a triangular incision through that portion of the scalp which had suffered from the blow, exposing a black and badly contused scalp. That portion of the parietal bone, from the temporal ridge to the inferior or squamous border had received the force of the blow. There was no perceptible fracture of the external table. The patient was not expected to survive the night from the overwhelming compression of the brain. Trephining was immediately and carefully performed on the parietal bone near the temporal ridge. The internal table was not fractured. The trephining revealed a very large and dense clot of blood, measuring three-fourths of an inch thick, which must have proceeded from a rupture of one of the branches of the meningia magna arteries. As much of the clot as could be removed was carefully taken away by my fingers and the handle of a small spoon. The respiration became more frequent and not so stertorous; the pulse more distinct and full; iris capable of being slightly excited. In fact, the removal of the clot made a perceptible though unsatisfactory change in his condition.

The incisions in the scalp were retained open; warm, wet, and often repeated cloths were applied during the night to increase the fluidity of the effused blood and to facilitate its exit from the cranium, and active cathartics administered. His pulse never indicated a want of depletion.

On the next day, the 21st, there was no very great change; still unconscious: obstinate constipation; whole nervous system dormant. He continued in this state two days, except that his bowels were freely evacuated in the mean time. He was kept on unstimulating and farinaceous diet.

The 24th—pupil now influenced by light; they still remain dilated. He talked incoherently; would attempt to answer questions, but would forget what was asked him; said a horse had kicked him, and could not recognize familiar faces. From this time, by strict attention to his bowels and regimen, and the continued application of cold cloths to his head, he slowly recovered from the dangerous compression under which he had been laboring.

Not anticipating any further difficulty, we thought nature would complete in her own time and in her own way the recovery. After some time had elapsed (three or four weeks), unhealthy granulations sprung up from the edges of the wound or incisions in the scalp—they were suppressed.

A short time after that, the patient came to my office for advice in consequence of the great quantity of matter, as he said, that came from his wound. Upon examining it I found it to be a thin pale ichorous pus, and immediately suspected the cause. Guiding a pair of forceps upon the end of my finger, I introduced it into the trephine hole, and detecting a loose bone, I extracted a portion of both tables corresponding with the circle of the trephine hole. Upon further examination with a probe, I found the posterior and inferior portion of the parietal bone also carious and rough; the superior edge of the squamous portion of the temporal bone could be distinctly felt, the parietal bone having been separated from it. Upon consultationwith Dr. K., we determined to give the carious bones time to be detached from the surrounding sound and lining bones, before any attempt be made to remove them. About two months from this time the dead bones having been completely detached and loose, by dividing it with a saw we removed a large portion of the posterior and inferior inner table of the parietal bone; the corresponding portion of the external table having been removed by suppuration. The portion of bone removed was an inch and a half wide by about two inches long. After the extraction of this bone, the patient recovered his health rapidly.

Comment on the Case.—Mr. W—— is deeply indebted to the art of surgery, and also to the strength and vigor of his constitution; and last but not least, he is under the most lasting obligation to the system of absorbent vessels for their prompt and efficient action, in assisting in the removal of the effused blood and the carious bones.—*St. Louis Med. and Surg. Journal, July*, 1856.

11. AN ABSTRACT OF A PAPER ON "POPLITEAL ANEURISM CURED BY COMPRESSION" READ BEFORE THE OHIO STATE MEDICAL SOCIETY. By *Dr. G. F. Mitchell*, Mansfield, Ohio.—The time was when the treatment of this disease was almost exclusively by ligature; latterly, however, compression has attracted the attention of the profession—and in the estimation of eminent surgeons, is to be preferred, as statistics show it to be the most successful.

Early in July, 1854, Dr. Mitchell was consulted by I. P., a drover, in reference to a large tumor situated in his left ham. Its history was as follows:

In the spring of 1853 he journeyed to California on foot, by way of the plains. Soon after his arrival there, while exerting himself violently at running, he felt a keen, stinging pain immediately posterior to his knee; shortly after which a tumor appeared. This had increased in magnitude, gradually, up to the time Dr. M. was consulted.

The tumor was nearly spherical—about four inches in diameter, fully equal to that of the articulation of the knee. The pulsation, over its entire surface, was uniform and synchronous with the arterial pulse.

Total disappearance of pulsation was caused, by pressure on the cardiac side; and increase of magnitude, by pressure on the distal side. Popliteal Aneurism was diagnosed—and treatment by compression recommended.

This was begun on the 25th of July—Dr. John W. Bond assisting—the foot and leg being bandaged as high up as the tumor. "One clamp tourniquet and one ring tourniquet were then applied over the femoralartery; these were alternately tightened and relaxed and their positions shifted along the course of the artery. In a short time, however, the ring tourniquet was removed, and a clamp tourniquet applied in its place."

The patient being intelligent, and desirous of a speedy and successful termination, was readily instructed in the use of the instruments, and left, in great part, to regulate the amount of pressure.

"For the first ten days, compression was applied from 12 to 14 hours in the 24. Some pain was experienced during this time, but none sufficient to disturb the patient." His rest was sufficient and refreshing; the tourniquets, however, being always removed previous to sleep. The tumor had, by this time, acquired considerable firmness—and the sack could no longer be emptied of its contents.

"For the next three weeks, pressure was continued from 16 to 18 hours per diem—the sack becoming firmer and pulsation less distinct. During the succeeding six days compression was applied about 20 hours in the 24, pulsation becoming feebler. For the next five days pressure was applied continuously."

At the end of this time all pulsation in the tumor suddenly ceased—diminution in size continuing to take place. Compression was continued, however, for a few days longer, when exercise was allowed him—the collateral vessels during this time, becoming perceptibly enlarged.

Six weeks precisely, were occupied from the time pressure was begun until all pulsation ceased.

At no time was the circulation through the vessel entirely checked. The pain was not severe—the pressure along the course of the artery being so alternated as to allow the patient ease and repose throughout the whole course of treatment.

Neither did redness nor excoriation of the skin at any time exist.

Nearly two years having elapsed since his dismissal, and his leg continuing as strong apparently as the other, we may conclude with confidence, that the cure was complete.—*Cin. Med. Observer, Aug.* 1856.

PRACTICAL MEDICINE.

1. Diseases of the Liver. By *Bennet Dowler, M. D.*—In this article it is not intended to give even one typical case, including post-mortem examinations, of all the varieties of hepatic disease observed by the writer, as the limits of the Journal will not at present allow of so great an extension.

Diseases of the liver, and the morbid humors resulting in that organ, were viewed by the ancients as predominant and fundamental in pathology. Hippocrates enumerated four cardinal humors, namely:—blood, phlegm, bile, and atrabile, or yellow and black bile. He maintained that the bile augments in summer—the black bile (atrabile) in autumn; the latter being by far the most dangerous and fatal. "All diseases, if they are internal, proceed from the bile or phlegm—melancholy from black bile, causing paralysis; those whom atrabile torments become diseased whenever the blood is overcharged by bile and phlegm."

Passing over two-and-twenty centuries, to the beginning of the second quarter of the present, liver-complaints, both functional and organic, redundance or vitiation of the bile, portal obstruction and congestion, were, to a great extent, the supreme and indisputable dogmas which reigned in the British and American Schools of Medicine. Venesections, local blood-letting, cathartics, blisters and mercurial medications, were the remedies then required. Many diseases not seated in the liver were thus cured—peradventure aggravated in some cases by treating them as hepatic diseases.

In France, on the other hand, Broussais, who for a time inaugurated and upheld *gastro-enteritis* as the universal Potentate in the realms of pathology, contended that the hepatitis was but secondary to the former. Broussais' therapeutics, that is, venesection, leechings, and starvation-slops, &c., were different, but no better than the curative plans of the ultra-hepatic school. But the disease then, it may be safely assumed, was neither exclusively gastric, nor exclusively hepatic.

The pathological anatomist who shall dissect a thousand bodies taken indiscriminately, will not only find examples of hepatic abscesses, the diagnoses of which had not been made out by the attending physicians until revealed by the post-mortem examination, but also many other lesions alike unsuspected, as hypertrophy, atrophy, induration, softening, increased tenacity, diminished cohesion, fatty, scrofulous, granular, nodular, scirrhous, and cancerous degenerations; anæmia, hyperæmia; interstitial fibrinous, saguineous, biliary, and tubercular deposits; variegated abnormities of color, gray, whitish, yellow, red, and purplish; and diminished and increased adhesion between the hepatic envelopes of the parenchyma, with thickening, opacity, and other changes in the former; inflammation, obstructions and closure of the hepatic vessels, particularly in the portal circulation.

The obliteration of the portal vein is according to some recent writers, frequent. Thus Prof. Gintrac of the Medical School of Bordeaux, in two papers having for their title, '*Observations et Recherches sur l'obliteration de la veine-porte,*' in the Jan. and Feb. (1856) Nos. of the *Jour. de Med. de Bordeaux*, has ably investigated this neglected subject, which he has illustrated by numerous clinical histories and post-mortem examinations.

Syphilis is supposed to originate hepatic disease. At a meeting of the Medical Society of Strasbourg, (February 7th 1856,) Professor Schützenberger read a clinical paper upon syphilitic degeneration of the liver, accompanied with the history of a case in a syphilitic female. He observes that certain lesions of both the liver and lungs, in new born children, have evidently a syphilitic origin. He attributes some very severe cerebral maladies to the same cause.

Inflammation of the liver, terminating in suppuration and abscesses, unconnected with traumatic lesions, is sometimes insidious—always dangerous. Indeed, fatal traumatic lesions occur, in which the abdominal walls appear to sustain little or no injury, and which a post-mortem examination alone can elucidate. In the Glasgow Med. Jour., for April, 1856, Dr. John Crawford reports a case which occurred on the 6th of December last, in which a boy, over whose body the wheel of a porter's barrow passed, died in half an hour. Under the authority of Sheriff Smith, Drs. Crawford and Patterson made and reported the following post-mortem examination:—

> "The body which was that of a healthy boy, about nine years of age, presented externally no traces of violence except, a slight abrasion on the back part of the right elbow.
>
> "On opening the belly, that cavity was found to contain upwards of a quart of fluid blood, with several large and firm clots. On the upper or convex surface of the liver was a deep rent, semicircular in form, about seven inches in length, and in its middle part nearly extending through the whole thickness of the organ. The other organs of the body were healthy but pale. The structure of the liver was also healthy, but it was drained of blood."

In most hot climates it appears that in many cases, abscesses of the liver are connected with dysentery, &c. About eleven years ago, Dr. Catteloup, of the French Army of Algeria, reported that in 157 deaths in his hospital practice, 20 were affected with hepatic abscesses. In none of these cases had the individuals been less than one year resident in that region; many of this number had had either diarrhœa or dysentery. Writers on the diseases of India report similar results. In New Orleans, the connection between hepatic abscess and dysentery is by no means satisfactorily established. Nor is there, according to the writer's experience, a higher ratio of hepatic maladies in the comparatively hot climate of this city, than in the cooler regions of Western Virginia.

The gall-bladder is liable to various lesions, often difficult to detect—biliary calculi, inflammatory affections, œdematous infiltration of the coats and ducts of this viscus, or dropsy, fibrinous and albuminous effusions into its sack, &c.

A case of chronic hepatitis, with a fistulous opening through the abdominal walls, was, some years ago, admitted into the Charity Hospital of this city. The patient wore a plug or compress, which he removed daily or oftener, in order to empty the sacculated sinus of its purulent accumulations.

The sack of the hepatic abscess, particularly in chronis cases, has usually a grayish, cheesy, rough, bark-like surface within, with a much firmer, sometimes an almost cartilaginous, out-lying stratum of a grayish bloodless appearance, beyond which is found a reddish, firm, inflammatory zone, deeper in the parenchyma of that organ.

It is reasonable to suppose that this concrete, unyielding, semi-cartilaginous firmness, and the consequent non-approximation of the walls of a protracted hepatic abscess, is one of the principal barriers to the healing or cicatrizing process.

Turgescence or sanguineous congestion of the liver may be, to some extent, simulated in the recently dead body, by the mode of procedure in the post-mortem examination, without the existence of any absolute abnormity, thus:—let the liver be dissected *in situ* before any other organ or great blood-vessel is removed or incised, whereupon, pounds of blood may often be discharged conformably to the law of gravitation, not to mention endosmotic and exosmotic actions in this and other adjacent organs having intimate membraneous, cellular, and vascular connections; while on the other hand, the dissection and removal of all the organs in the abdomen except the liver, will prevent the apparent sanguineous engorgement alluded to, and even drain the liver, giving it a bloodless appearance.

In many cases, soon after death, endasmotic action transports the bile from the gall-bladder into the subperitoneal or cellular tissues, producing extensive yellow, green, and black discolorations upon the concave surface of the liver, and throughout and beyond the hypochondriac region, which have been mistaken for grave pathological alterations.

Anatomical Illustrations of Hepatic Diseases..—Hepatic Abscess terminating in fatal Consumption.—The details of the following case are omitted with few exceptions. The next case is supposed to illustrate the anatomy of this.

On the 1st of December, 1833, I was called to see J. Y. D., a lawyer, a native of Virginia, aged about 25, a resident of Clarksburg, in the State aforesaid. Mr. D. who had not been in good health for several years was neither robust nor fleshy, had a sallow appearance; torpor of the bowels; slight pains and tumefaction in the liver; a little cough with expectoration of mucosity; respiration little disturbed; pulse full and hard; tenderness upon pressure over the liver; an occasional transient chill, &c. Viewing the case as a sub-acute hepatitis in an enfeebled constitution, active remedies were nevertheless cautiously used. as blood-letting, mercurials, cathartics, diaphoretics, occasional opiates, antimonial pustulations, &c. In three weeks an apparent improvement had taken place, and in the fourth week tumefaction and burning pains occurred in the liver; respiration became much embarrassed, wheezing, &c.; pulse excited. hard and small; suddenly, at 4 A. M., on the 27th, he expelled through the trachea, with a strangling cough, about a quart (as he estimated) of thick, yellow, fœtid pus, with some frothy mucosity.

January 21st, 1834; has had for several weeks night sweats, irregular expectorations, frequent cough, pulse 110 to 130; healthy alvine evacuations, and a good diet.

In February his health improved considerably, excepting as it regarded pulmonary symptoms; the expectoration however had lost much of its purulent character, which was replaced by dense fibrinous and mucus masses, several ounces of which were sometimes expelled in one paroxysm of coughing.

In March, April, and May, his case assumed the form of pulmonary consumption, from which, a few months later, he died.

The following case though more rapid in its march and less identified with pulmonary consumption in its termination, is probably a type of Mr. D.'s case some months before the hepatic were replaced by the pulmonary symptoms.

S. H., born in Germany, aged 46; resident in New Orleans 12 years; grocer; sick 13 weeks; treated of late with palliatives, as morphine, full diet, &c.; diagnosed as phthisis; suffered but little pain, for several days before death; coughed up pus and blood estimated by his physicians at 2 lbs. daily; stools natural; intellect little affected; right hypochondrium tumefied.

Post-mortem examination fifteen minutes after death. Body emaciated; chest expanded; muscles attenuated; a cicatrix was noticed from an operation for inguinal hernia.* Head: Serosity in the arachnoidal sack and in the ventricles of the brain, about 6 ounces; subarachnodial vascularity and infiltration with an albuminoid exudation.

Chest and abdomen.—Heart large yet attenuated; left lung natural, the right almost totally disorganized; its periphery universally adherent to the costal pleura; its central postion comprehending nearly all of the parenchyma was a vast cavity filled with nearly 3 lbs. of pus; this sack communicated with one equally large in the right lobe of the liver, the perforation through the diaphragm being large enough to admit the fist; most of the bronchial tubes destroyed; pus in the cavities, flaky and thick. The hepatic sack or cavity having been washed out with a powerful stream of water, was found to be of a dull white color, very rough, like the bark of an oak, resting on a base half an inch thick, which was bloodless and almost cartilaginous in consistence; the residue of the liver pink-red and loaded with blood which flowed freely from every incision; the gall-bladder contained a yellow mucosity. Some portions of the mucous membrane of the colon and rectum, thickened and reddish; the small and large intestines loaded with fæces altogether natural in color, consistence, &c.

Hepatitis. Abscess.—The following summary of a post-mortem examination was made only in part by the writer.

A middle-aged man who had been long treated for a bilious diarrhœa, and bilious vomitings of a yellow color, died July 30th, 1843. Liver—double size; its parenchyma nearly black; iucisions gave a smooth, dark, glossy surface; the organ had a central abscess, the sack of which contained several ounces of pus; the gall-bladder contained five or six ounces of yellow, normal bile

Other examples of internal abscess of the liver, which I have witnessed, might be related were it necessary, most of which had eluded detection on the part of the medical attendants.

In diagnosing abscesses, particularly upon the inferior or concave aspect of the liver, it is very important to curve the body forward, so as to relax the abdominal muscles—a posture which, indeed, the patient generally assumes, as being the least painful, and one favorable for detecting the deep-seated fluctuation of circumscribed abscesses.

Years ago, there was a patient who remained a considerable time in the Charity Hospital, suffering from an obscure malady, the nature of which gave rise to an extraordinary, perhaps unparallelled diversity of opinion; whereupon Mr. Marks, then resident student in the hospital, determined, as he said, to obtain and record the opinion of all the physicians in the city as far as possible. Having been several times requested to diagnose the case, I went up stairs for the purpose with the late Prof. Carpenter, the student aforesaid, and others. I pronounced the case at once, abscess of the liver—an opinion which Mr. M. declared had not been previously given by any one. The patient after lingering for some time died. The post-mortem examination, which however, I did not witness, confirmed my diagnosis fully, as physicians, students, and other witnesses affirmed.

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*An apothecary acquainted with H., says that this operation was performed on this subject by the late eminent Dr. Luzenberg.

Hypertrophy of the Liver.—1842, July 25th. L. C., born in Italy, aged 28, resident eight years; sick one month; early history imperfect; variously diagnosed by physicians; took but little medicine during the last week before death; complained of little except debility; was free from delirium, vomiting, diarrhœa, and dysentery.

Dead half an hour—body warm, supple; skin and adipose tissue of a light bronze or lemon color, less marked in the latter; free from emaciation, being rather fat; the inferior portion of the abdomen concave; no cadaveric injections or discolorations; free from dropsical effusion in the cellular tissue.

Brain.—Natural in consistence but anæmic; 2½ ounces of serosity, chiefly in the ventricles.

Right Lung.—Collapsed to one-eighth of its normal size; the pleural cavity contained from three to four ounces of serum; left lung extensively adherent to the pleura costalis by white tissue, free from indication of recent inflammation.

Œsophagus.—Blanched; mucous membrane of the stomach of a pale claret color; cœcum thickened, its mucous membrane ulcerated as large as a dollar; bowels empty excepting a few ounces of colorless mucosity; mesenteric glands slightly enlarged; omentæ and mesentery rather loaded with fat, and somewhat injected. The cava, vena portæ, and azygos much distended with pink colored blood, forming soft coagula and abounding in serosity.

The liver was a pale bronze color, much indurated; its parenchyma anæmic, discharging a little pale lemon colored, oily, liquid; it extended from the right to the left side of the abdomen, descending towards the pubes, and was supposed to weigh 15 pounds.

The most extraordinary instance of hypertrophy of the liver I have ever seen, was in a child in Virginia, aged three or four years, whose liver, at the time of its death, must have weighed as much as the one-third of the residue of its emaciated body.

Hepatitis with numerous Complications.—A. P., a white female, unmarried, aged 35, last from Red River, (Louisiana;) resident and sick in New Orleans five weeks. For one month before death her case had been variously diagnosed by physicians, as jaundice, typhoid fever, meningitis, hepatitis, yellow fever, gastro-enteritis, dysentery, &c.

The patient, who was often delirious, died, July 21st, at six A. M., 1843; six hours after which, the post-mortem examination was made.

Body.—Large, warm, yellow, without rigidity, abounding in fat, which latter varied from one to two inches in thickness on the chest and abdomen; muscles large, firm but somewhat pale; bed-sore upon one buttock; slight abdominal convexity; no petechial or sanguineous discolorations.

Head.—Serosity two ounces; arachnoid and pia mater increased in thickness and tenacity, with considerable vascularity and sanguineous injection of the latter.

Chest.—Left lung engorged and adherent to the costal pleura; right side of the heart distended with coagulated blood, together with yellow fibrinous concretion or polypi.

Mouth.—pale; tongue clean; gullet natural.

Abdomen.—Omental tissue loaded with fat; the stomach contained a dark, muddy, liquid; the cardaic portion of the mucous tissue as large as the hand, softened almost shredy with faint, dark aborizations; the large intestine from the cæcum to the anus was of a fleshy color, and grew thicker progressively, chiefly in the mucous coat, the whole being augmented in weight from four to six times, containing a thin, yellow liquid; kidneys small and somewhat indurated; spleen extremely supple and tough; liver enlarged three or four times, adhering by several firm bands to the diaphragm, its capsule strongly adherent to the parenchyma; the parenchyma consisted chiefly of innumerable yellow grains or nodules, from the size of pearl barley to that of the garden pea; this whole organ was rather firm, yet inclining to flexibility and tenacity, falling short of cirrhosis in hardness; the granular, fat-like matter, intersected or conglomerated by pale whitish tissue, did not grease the knife, nor discharge any oily liquid as in fatty livers. The gall-bladder contained a pale, thin, ropy liquid; ducts pervious. The ovaries had degenerated into two conical, oblong, smooth, symmetrical sacks, like the gall-bladder, their apices pointing towards the womb along the fallopian tubes—that on the right side contained about two and a half ounces—that on the left about one ounce of liquid like two kinds of black vomit—the tobacco juice variety, and the sedimentary, charcoal-like matter in minute division and flakes.

The auscultatory history in these cases is so imperfect that all mention in this behalf is omitted.

The physiologist will find in these cases much not accounted for as it respects the function of the liver in regard to the secretion or excretion of bile, seeing that in several fatal cases with great disorganization of the liver, the stools were healthy in color, consistence, scent, &c. Neither in the pus discharged nor in that found encysted, were effusions of bile noticed.—*New Orleans Medical and Surgical Jour.*, *July*, 1856.

2. TREATMENT OF TYPHOID FEVER. By *Joseph R. Smith, M. D.*, Elyton Ala.—In presenting any subject to the public on medical pathology, we conceive it to be of infinitely greater advantage to stick to a true and correct relation of facts as presented to the medical practitioner, than to a lengthy detail of fine spun theories, as far-fetched hypotheses, deduced from doubtful, or probably, false data.

Most writers on medical subjects at the present day, I regret to say, too often have a theory to sustain, when making innovations on the treatment of the most formidable diseases of the country, greatly to the detriment of the speedy advancement of sound pathological information, and a safe and correct treatment of pathological lesions when truly ascertained. And that such has been the case in that very troublesome and common disease—typhoid fever—the "*opprobium medicorum*," we are the more thoroughly convinced from every article we have read upon the subject. There is not at the present day, scarcely a physician of any note or experience in the treatment of typhoid fever, when not complicated with other diseases, but believes that the main, or probably the only pathological lesion in this disease exists in Peyer and Brunner's glands. To this opinion we do not entirely assent; but as our opportunities (on account of our country situation) for making post-mortem examinations, have been too limited, to speak authoritatively on this head, we found our own treatment on this hypothesis, or fact as it may be.

We have now been observing and treating typhoid fever since 1845; at which time it prevailed in this village as an epidemic; and we are convinced from an external observation of the disease in all its varied forms, shades, types, and phases, that there exists in the medulla oblongata *morbid lesion* of such a character, as to have as yet escaped the scrutinizing eye of the microscopic pathologist. What this lesion may be, or is probably like, we do not in this short article pretend to say, but of its existence we do think all who have treated this disease in all its varied forms, grades, and stages, will have reason to suspect.

And we doubt not, but that if our microscopical pathologists in their future post-mortem examinations after morbid lesions in this disease, will direct their researches to the medulla oblongata, and the base of the brain generally, they will ultimately have their labors rewarded by such a discovery. The field is an enticing one, and he who proves his success by his labors, will not only establish an enviable professional reputation, but be counted a benefactor of suffering humanity.

But to the object of this communication, which is to say, that for six months past *we have been treating successfully typhoid fever of all forms, grades, and stages, by locking up and so keeping the bowels, until the patient is convalescent beyond a doubt*, and as for our success after a correct and unvarnished statement of facts, we leave our readers to judge.

Our experience extends to twelve cases only, all children under fifteen years of age, except one patient aged about forty-five. In every case we have been successful in effecting a cure; in a majority in three weeks; three cases, well marked in every particular, terminated in ten days; these three cases we will remark were seen by us during the incipient stage of the disease—recognized and prescribed for accordingly upon the plan hereafter to be detailed. None continued longer than four weeks, save one, a negro boy, who relapsed after being convalescent, on account of carelessnes on the part of the nurse, who failed to keep him well covered during one of the extreme cold nights of last February. Out of this number of patients, we have had every variety of symptom that ever attends this disease, except, probably, epistaxis and melæna. Some two or three were even complicated with well marked pulmonic symptoms.

That our readers may know that we were treating pure typhoid fever, and not a "*typhoid state*" of some other disease, we will first give a succinct detail of the most prominent symptoms which prevailed in the cases we treated on this new plan, and then relate the treatment.

The fever was usually preceded for several days by general lassitude, *malaise*, and indisposition to mental or corporeal exertion, with slight chilly sensations, which were followed by, for the most part, a persistent fever; but in some instances there would be partial remissions every twenty-four hours, though usually without perspiration, or any abatement in that train of nervous symptoms, which almost invariably attend; such as subsultus tendinum, low muttering delirium, dilatation of the pupil, and tinnitus aurium, together with deafness. After the fever was fully developed, producing the above unmistakable train of typhoid symptoms, the palms of the hands and soles of the feet would become remarkably dry, hot and crusty, and it is at this stage of the disease that we could the more easily discern the characteristic sudaminæ which appeared in almost every patient under twelve years of age; pulse generally weak and frequent, patient rarely complains of any pain, but will say nothing ails him or her, and to the question, how they are—will generally reply, "pretty well," or "getting well," when probably, in ten minutes, he will be muttering to himself some unmeaning incoherent sentences; from this kind of delirium he is generally easily aroused, but as quickly lapses into the same state. Where this train of symptoms have been neglected for two or three days, we have usually found meteorism, abdominal tenderness, the bowels much disposed to diarrhœa, with considerable "*Grouillment a éntrailles*," both of which latter symptoms invariably gave way so soon as the grand desideratum was accomplished—*locking up the bowels.*

The tongue in most cases is dry, parched, cracked, and covered with a dark brown fur; the teeth and lips in severe cases were covered with an incrustation of similar appearance.

Treatment.—The first inquiry we make *now*, on visiting and *recognising* a case of typhoid fever is—have the bowels been running off? If we find they have, we immediately administer a large dose of Tinct. Opii, thirty, forty, or sixty drops, proportioned to the frequency of the alvine discharges, and direct a similar dose to be administered at every subsequent operation. After the first dose of Laudanum, we begin with the following powders:—℞ Tannin 36 grs.; Pulv. Doveri ʒj Mix. Ft. pills or powders 12; one to be given every two, four, or six hours, dependent entirely on the frequency of the purging, and the severity of the abdominal symptoms. These powders we even continue to administer notwithstanding the first few days by the asssistance of the Tinct. Opii., we may have checked the purging and quieted other abdominal symptoms; but so soon as the latter object has been accomplished, we suspend the use of the Laudanum, and continue the powders at greater intervals—generally about every six hours. And under no circumstances do we attempt to act on the bowels with any purgative whatever, notwithstanding the patient may not have had an operation for ten days. In every case where we have succeeded in *completely locking* up the bowels, (and we have as yet succeeded in all attempted,) and maintaining that condition sufficiently long, we have had the gratification of seeing an amelioration in the severity of all the troublesome symptoms, and by scrupulously persevering with the powders, are sure to have a safe and speedy convalescence. Where the bowels have been kept quiet as long as three days, we generally find the skin assuming a moist, healthy feel; the tongue becomes more moist, eyes and intellect more bright, with some return of appetite; the latter we invariably gratify, generally selecting the quality and quantity ourselves.

Where cephalalgia and muttering delirium attend, evidencing great cerebral disturbance, we usually combine with the foregoing powder, Gum Camphor 3 grs. to each dose, with the happiest effect. Should a tympanitic state of the bowels exist, evidenced by a troublesome and sonorous borborygmus, we administer an occasional dose of Ol. Terebinth.; this drug we rarely administer in such symptoms, but we obtain the desired effect. If there exist much abdominal tenderness, with the latter symptoms, we rarely fail to relieve it with a great amelioration of the others, by putting on, as hot as can be borne, a common wheat bran poultice.

We are by no means wedded to our little class of therepeutical agents as given above; and would be willing to use any others answering as well; we contend for the grand and principal object, viz: *locking up the bowels;* and when that is accomplished the patient is cured.

We have maintained the bowels in this closed condition, wlthout the patient having a single operation as long as ten days; during the whole of which time we have had, in every case, the gratification of seeing a daily improvement in all the troublesome symptoms. In fact, we have never yet had a case, since treating upon this plan, but what began to improve in every particular so soon as the bowels were stayed as long as forty-eight hours, and the longer the condition was maintained, the greater the improvement.

Having already spun this article to an unexpected length, we will leave the *modus operandi* of this treatment to other and abler pens.—*New Orleans Medical and Surgical Jour., July,* 1856.

3. VERATRUM VIRIDE. SEX. SYST. POLYGAMIA, MONŒCIA, (RHIZOMA.) *By* Prof. *C. K. Winston, M. D.*, of Nashville, Tenn. (Paper read before the Tennessee State Medical Society.)

The *Veratrum Viride*, U. S., (secondary list) according to J. Carson, is known in the United States as *American Hellebore, Swamp Hellebore, Indian Poke*, and *Itch Weed*. It has a perennial, thick, fleshy root, tunicated at top, the lower part solid and sending off numerous white or light yellow radicles. The stem is annual, from two to three feet high, and pubescent. Leaves at base six inches to a foot long, broad, oval, nerved, acuminate, of a deep green color, and pubescent; those on the stem narrower, and at the summit, bractæform. Flowers in panicles, terminal, and of a greenish-yellow tint. The calix is wanting, petals six, stamens six, pistil a rudiment, (Wildenow), germs three, when not rudimentary, on the lower portion of the panicle.

It is found in various portions of the United States, early in March, along the banks of the water courses, in meadows and swampy places, and belongs to the same order of plant as the colchicum autumnale, sabadilla, &c., &c.

The root is the only part officinal, though the whole plant has a burning acrid taste, which is very persistent, and followed by a copious secretion from the mucous membrane. Like veratrum album, when powdered and snuffed into the nose, it produces a violent sternutatory effect. The profession is indebted to the researches of Mr. Henry Worthington for the composition of the root of veratrum viride, which may be found in the American Journal of Pharmacy, volume 10, page 97. He found it to contain gum, starch, sugar, bitter extractive, fixed oily matter, coloring matter, gallic acid, an alkaloid identical with the veratria, lignin, and salts of lime and potassa.

Experiments made with veratrum viride, by Mr. Worthington, Drs. Osgood, Ware, Norwood and others, prove conclusively, that it is an arterial sedative of high power. Its action is prompt, quite persistent, and so far as observation has gone, attended with no danger when given in the proper condition; differing in this respect materially, from colchicum, digitalis, &c., &c. In suitable doses it soon brings on nausea, with frequent retchings and vomiting. There is also copious secretion from the bronchial mucous membrane—sometimes free diaphoresis, at others diuresis, and occasionally free discharges from the bowels. One of the other of these effects is apt to continue for several hours, at the same time that the pulsations of the heart are greatly lessened, and the force of the circulation weakened.

The most remarkable, and, at the same time, the most important physiological effect of veratrum viride, is the reduction of the heart's action, and that too with entire safety, (so far as I am informed) to the patient. But few articles of the Materia Medica possess this power. Digitalis may do it, but then the tendency of the article to cumulate makes it, in order to gain its full effect, quite dangerous. Colchicum and tartar emetic may do the same thing, but they frequently produce unpleasant effects, such as excessive purging, inflammation, ulceration, &c., &c. The pulse, however, may be reduced by veratrum viride, from 130 to 40 beats in the minute, with entire safety to the patient, and without the least injury to the circulatory or nervous system. This can be done with no other remedy, and it hence follows that veratrum is a remedy of the first importance.

At least nine-tenths of mankind die of inflammatory disease. Arterial excitement is one of the most invariable elements of inflammation, and one of the most important objects in the treatment of it is to subdue this excitement. This can be done in several ways; by bleeding—by purging—by nauseants—by starvation, &c., &c. But by all of these methods we necessarily exhaust the patient, and endanger the recuperative powers. These remedies, moreover, when applied by the most skillful hands, not unfrequently fail. Who, in the treatment of grave cases of pneumonia, pleurisy, bronchitis, rheumatism, &c., has not watched the effects of the lancet, tartar emetic, and the like, with painful solicitude? And who has not often watched in vain? The pulse, that harbinger of health or disease, has beat on the even tenor of its way, as if to mock the best directed measures. What physician has not sighed for just such arterial sedation as that produced by veratrum? With this remedy in hand, we may say to the ebbing crimson tide, as Xerxes said to the ocean, but not in vain, "thus far mayest thou come, but here shall thy proud waves be stayed." The heart obeys the mystic voice, and there is a great calm. Not such a calm as arises from a violent subduction of the vital powers, but a calm persuaded rather than conquered. And this fact, in my estimation, constitutes the great superiority of veratum over any other arterial sedative.

It is peculiarly adapted to the treatment of pleurisy, pneumonia, rheumatism, and bronchitis. In these conditions, if its advocates are not mistaken, it is almost as effective as quinine in malarial fevers. And in the phlegmasiæ generally, it is regarded as more or less valuable. In all conditions to which it is applicable, much will depend upon the time in each case, at which its use has been commenced. If deferred until actual organic lesion has supervened, its benefits are equivocal, or at least not so obviously curative, as when given at an earlier stage. It may not be out of the way, also, for me to suggest that it is not so valuable in the treatment of inflammatory diseases, arising from a specific virus.

The preparation generally used is the tincture. That prepared by Dr. Norwood is commonly preferred, though I do not think it possesses any advantage over an ordinary well prepared tincture. The dose for an adult, is from 5 to 6 drops, in a little water, every 2 or 3 hours, increasing 2 or 3 drops upon each repetition, until some of the characteristic physiological effects are produced. It is then to be withdrawn until all the characteristic effects pass off, which will ordinarily occur at the end of 8 or 10 hours. It may then be resumed if necessary. In other words, it should be repeated until the heart's action is reduced, or until the stomach is nauseated. Most generally both these effects occur, but this is not always the case, and nurses should be instructed accordingly, or otherwise injury might result.

Several peculiarities in the effects of veratrum, though but partially sustained by experience, have been suggested. First, that it does not act so promptly upon children as adult subjects, or at least that a larger comparative dose is required to produce a given effect, and that it is less apt to excite nausea. Second, that it is not applicable in inflammatory disease when there is sickness at the stomach. Third, that it is an abortive. This last point, first suggested I believe, in an inaugural thesis by Dr. Brown of Georgia, and published in the Nashville Journal of Medicine and Surgery, deserves special attention. He says that abortion does not follow immediately upon its use, but that after the lapse of a few days it is sure to follow. Now if this be true, it is of the highest importance that it should be known. Upon the first view, on account of its powerful influence on the circulation, it may seem philosophic, but when it is remembered that the fœtal circulation is but slightly, if at all affected by any disturbance of the maternal, no special reason appears why it should prove abortive, and the fact remains to be established by experience, Dr. Newsom, of Georgia, informed me that he had called in question this opinion of Dr. Brown, and that he had exhibited it in cases of pregnancy, with the happiest effects. He says that he has been in the habit of using it on all occasions, in every form of inflammatory disease, and had never seen any ill effects from it. To the same extent is the testimony of several of the best practitioners of the South. Dr. Maddin, who graduated last winter in the Medical Department of the University of Nashville, informed me that a lady, in Huntsville, Alabama, I believe, died soon after taking the second dose, but I do not think it sufficiently appears that she was killed by the veratrum. Upon the whole, I am of the opinion that no remedy of the materia medica of like powers, is by any means so free from danger.

It may not be uninteresting in this connection, to detail a few cases illustrative of the views here set forth.

No. 1. This was a negro girl belonging to Mrs. Horton, of this vicinity, aged 17 years. I found her laboring under all the symptoms of pleuro-pneumonia. She was successively bled, cupped, tartarized, blistered, &c., &c., with but slight benefit. Believing that she would soon die, unless the arterial excitement could be subdued, I gave 12 drops of the tincture of veratrum. In 10 or 15 minutes there was a profuse secretion of saliva, in a half hour she became violently sick at the stomach, and the pulse was reduced from 130 to 60 per minute. The retching was very distressing, so much so, that I became alarmed. I stayed with her two hours, at the end of which time the sickness had pretty much subsided, and was followed by a copious bronchial secretion. This was about 12 o'clock at night. When I returned the next morning, the sickness was entirely gone, and the pulse had recovered its former velocity. The veratrum was repeated in 8 drop doses every two hours; the second portion produced the desired effect, when it was withheld. From this time the patient rapidly recovered, it only being necessary to repeat the medicine on but one other occasion.

No. 2. A young man, aged 25 years, named Mahon, who worked in the Nashville manufactory, was seized with pneumonia. He sent for Prof. Watson, who could not be found. Waited for him two days, when I saw him. Gave two drops of veratrum, repeated every two hours, increasing three drops upon each repetition. When I returned I found him exceedingly sick, (and having taken the third potion,) vomiting every few minutes, and throwing off large quantities of mucous. Such was the effect of the first resort to the veratrum, that it was unnecessary to repeat it, or to use any other remedy. After the nausea subsided, a bountiful diaphoresis occurring in connection with free expectoration, a cure was speedily effected.

No. 3. Mr. Mosely, aged about 60 years, was seized with pneumonia. Gave the veratrum as in the former case with like results, it only being necessary to repeat it a second time, when he was relieved.

No. 4. W. Thomas, aged 25 years, was attacked with acute rheumatism—had used the lancet, colchicum, opium, lemonade, &c., &c., with but little benefit—gave the veratrum with the highest success. The pain in this case was excessive. As soon, however, as he was brought under the influence of the remedy, a most soothing anodyne effect was induced, with copious diaphoresis. It was necessary to repeat the veratrum for three successive days, when he was relieved.

No. 5. A little child of Mr. Jones, seen in company with Dr. J. S. Young of this city. Cerebral inflammation of several days standing —advised veratrum in two drop doses—no effect—it may have been too late.

No. 7. A negro boy, belonging to F. R. Barnes, aged 22 years. Pneumonia—treated him several days with the usual remedies—could not subdue the pulse with the lancet, although resorted to several times—could not nauseate the stomach with tartar. Gave veratrum in doses of 16 drops repeated every two hours on three successive days, without the slightest effect. Patient recovered, as I think, from the benefits of a copious bleeding, resorted to on the 7th day.

No. 7. The last case, though many others might be detailed, was that of a child, aged 18 months, of J. O. Wright. Pneumonia—used tartar, warm bath calomel, &c. Gave one drop of veratrum—waited two hours, gave three drops. Patient became calm and slept. The pulse was reduced from 140 to 40 per minute. The narcotic effect in this case was greater than in any I have observed. In fact it was so great, and the pulse so much reduced, that I became alarmed, and watched it with no ordinary degree of solicitude. In due time however, the pulse rallied, and in 8 or 10 hours the effects had entirely passed off—the remedy was repeated in 2 drop doses on two other occasions. The child recovered rapidly.

This is one of the cases going to show that a profound impression may be made upon the circulation without affecting the stomach; there was not the least nausea, and if I am not mistaken, this is more common with children than adults.

The effects of veratrum as above recited, are corroborated by some of the most eminent physicians of the South West. As to whether the remedy will be found to be equally effective in higher latitudes, and upon more extensive employment, remains to be established. If so, I shall not hesitate to regard the discovery of the peculiar physiological effects of veratrum viride, as second to none which has crowned the investigations of medical men, in this department of medical science.—*Nashville Journal of Medicine and Surgery.*

Quadruple Birth.

[The following letter from Dr. P. T. Mask, of Falcon, Arkansas, was received too late for the July No. of the Review, since which time, we observe that an account of the case described, has appeared in the New Orleans Med. and Surg. Jour.]

"*Messrs Editors:*—On the 7th of February last, I was called to see a negro woman belonging to Col. John Dockery, of LaMartin, nine miles distant. I arrived about 8 o clock in the morning, and found the patient in active labor. About 12 A. M. she gave birth to a male child weighing 8 lbs; after which she continued, in rapid succession, to expel three girls, each weighing 7 lbs. The time intervening between the birth of the first and second children was about an hour, and between each of the others half an hour. After the birth of the first, two pains sufficed to expel each of the remaining three. The first pain was always succeeded by a large discharge of liquor amnii, and the second carried the child out without the least apparent difficulty.

"Three of the four were head presentations, the remaining one a breech. There were two placentæ, two cords being connected with each. The amount of liquor amnii was enormous, and may probably in part account for the perfectly helpless condition of the woman for several months before confinement, during which time, indeed, she seldom lay down, and was unable to remain in that position longer than a few minutes on account of great abdominal pain. There was great enlargement and distension of the superficial veins.

"It may also be added that after arrangements had been made with two other women on the place who had young children to take each one, leaving the mother only two, it was ascertained that she was able to furnish sufficient milk for the four, and refused to have them separated. She was the mother of five children previous to this grand display of her powers of generation.

"Col. Dockery being the father of railroads in Arkansas, and more especially interested in the Mississippi, Ouachita, and Red River line, named the three girls Mississippi, Ouachita, and Red River, and the boy, Railroad."

[We feel tempted to inquire of the Doctor, who was the *mother* of the Arkansas railroads? We doubt not a history of her accouchement would be acceptable to many readers of the Review.

In connection with this subject we cannot but remark upon the astonishing number of supernumerary births that has been reported within the past few monhts. It is only about two months since a German woman of this city presented her astonished husband with two boys and two girls, all of whom, we learned a day or two ago, were in a thriving condition. The following collection of similar cases we copy from the New Jersey Medical and Surgical Reporter:]

"The wife of Mr. Washington French, in Mississippi, has just presented him with two boys and two girls at one birth. Mr. French was forty-five years old when he married, and has been married one year. Though commencing late, he is likely to be surrounded by a large family before old age overtakes him. Thus it will be seen that our 'glorious country' is still in advance of the rest of the world, including

France, in the baby producing business—to say nothing about great names for 'little responsibilities'—as well as in everything else."—*N. O. Medical News and Hosp. Gazette.*

"BIRTH OF FOUR CHILDREN.—Mrs. Sherratt, wife of John Sherratt, porter of Newton Street, Brook Street, Chorlton-upon-Medlock, has been lately delivered, by Mr. A. W. Close, M. R. C. S., of four living children, three girls and one boy."—*Lancet.*

"EXTRAORDINARY BIRTH.—On Sunday morning, the 13th of April, between the hours of eight and ten, Mrs. E. Phin, wife of Edward Phin, a guard in the service of the London and Northwestern Railroad Company, residing at 144 Scofield Street, Bloomsbury, Birmingham, was safely delivered of five children—three boys born alive and doing well, and two girls born dead."—*Assoc. Med. Jour.*

EDITOR'S TABLE.

IN the first No. of the Review, we (the Junior Editor), took occasion in our western pioneer style, to assert for the profession in the South and West, a comparative independence of European criticism on the condition of medicine and medical literature in this country generally. In doing this, we necessarily imputed, but as vaguely as possible, to other sections too much of an eye to the frowns of our assumed masters on the other side of the Atlantic. In firing this squib, and we supposed that it was only a squib, our object was to scare up the game, for, from the nature of the cover and certain well known tracks and scratches among the leaves, we felt sure that game was to be found. And we were not mistaken; but its size and the quarter whence it came, rather astonished us.

The Medical Examiner of Philadelphia thus comments on the article in question:

"We sincerely regret to see such sweeping imputations, and vague as they are sweeping, urged against any portion of the Union. They are provocative of a spirit, that, largely indulged in, cannot but exercise a most injurious influence upon the good feeling which at present exists among all the journals of our country. Such appeals to sectional prejudice we know, are not uncommon in political harangues; we consider them out of place, however, in a respectable and scientific journal, one of whose endeavors, and not its least one, should be the maintenance of a friendly and fraternal feeling between the members of a common profession. The charge, which we fully believe to be unfounded, is the more remarkable, coming as it does from one who has so little to complain of in the manner in which he has been treated by the very critics whose good nature and sense of justice he thus takes the earliest opportunity to wound."

In these days of 'fuss and feathers,' when the atmosphere is filled with the noise of political fire-crackers and pop-guns, and the medical profession is all in a stew because the Washington doctors used stitches instead of plasters, in treating Senator Sumner's scalp wounds, which Dr. Bunting, of Alexis St. Martin notoriety, swore upon King James' version, were six inches deep, we can see some degree of fitness in such moral homilies as that which the Examiner has deemed it necessary to read us. Not wishing to exhibit ingratitude for the labored advice thus kindly proffered, we return sincere thanks for the same, and shall, it may be, try to follow it; and yet we must be allowed to say that we have become so thoroughly disgusted with the everlasting cant about sectionalism, and the universality of medicine, about which latter, a magniloquent young gentleman at the late meeting of the American Medical Association, had so much to say, that the sight of anything that bears any resemblance, however remote, to such nauseating stuff, is sure to excite in us an unpleasant reflex action. And pray Mr. Examiner, won't you permit us to be sectional in anything? Will you deny a man a home because he happens to be a Doctor? Must he live and die all over the United States? Or, if he is so fortunate as to possess a local habitation and a name, is it treason to speak of it? Do be a little charitable, and if ever in future we should unconsciously give expression to a little of this pride of birth and education, don't for mercy's sake, disturb our hearing by running over us with such an awfully rattling sentence as that in which we are charged with making sweeping imputations 'provocative of a spirit that, largely indulged in, cannot but exercise a most injurious influence upon the good feeling which at present exists among all the journals of our country.'

In reply to the closing sentence of the paragraph quoted above, all that we have to say, is, that the Senior Editor of this Journal, although not the writer of the editorial for which he is thus unreasonably abused, is not so 'green' as to allow the flattery of the British press to warp his judgement concerning the low estimate they almost universally place upon the state of medicine and professional morality in this country generally.

In a subsequent paragraph, the same writer, who really seems to desire the good will of every body except Dr. Dowler and the Editors of the Review, indulges in erroneous inferences with which to point a little sarcasm, that we think hardly justifiable in an honorable enemy. We give him the full benefit of his own statement:

"In another editorial, the Boston Medical and Surgical Journal, and by implication all other Journals who have copied the article, are charged, when noticing the recent researches of M. Brown-Séquard, with ignoring Dr. Bennett Dowler's claims to discoveries made upward of twelve years since, upon the functions of the spinal nerves. We have looked through several recent American works on Anatomy and Physiology in relation to this subject, and in none of them have we found any mention made of Dr. Dowler's views. All of them, in fact, agree with Dr. Richardson, the Junior Editor of the Louisville Review, who makes the following statement in his Elements of Human Anatomy, (1854): 'Each spinal nerve originates from the side of the cord by two distinct parts or roots, called from their relative position the anterior and posterior roots; of these, the former is entirely motor and the latter sensory in its function.' It would be preposterous to suppose that there existed a combination among all the writers of these works to reject Dr. Dowler's views; for reasons best known to themselves, they took no notice of them. Under these circumstances, we do not see why the charge mentioned above should be especially aimed against an Eastern Journalist."

It must be evident to any one who will take the trouble to refer to the editorial at which the Examiner tries to take umbrage, that the author of the above paragraph is either a very careless reader or a very hard-run caviler. What we found fault with the Boston Journal for, was simply its fulsome eulogy of the Frenchman for a supposed brilliant physiological discovery of which an American had made the announcement and given his proof twelve years before. It seemed strange to us, and still seems strange, that M. Brown-Sequard should be extolled to the skies for announcing a doctrine which the editors at once assumed to be a fact, while Dr. Dowler who has been so long laboring to convince the world of precisely the same thing, should be passed entirely unnoticed. In the editorial referred to, we did not express ourselves as yet willing to receive the discovery as a truth; indeed, we plainly intimated that we had doubts about the matter, and until the results of Dr. Dowler's experiments are verified by other physiologists, we shall hold fast to, and continue to teach the generally received doctrines of Sir Charles Bell.

We do not suppose for one moment that the Boston Journal or those other journals which were in such haste to copy the article, intended to do Dr. Dowler injustice,—and a palpable wrong to one of our own countrymen was certainly committed when the periodicals in question announced their belief in the truth of the new doctrine and gave a Frenchman the credit of its establishment,—but we look upon the circumstance as one that may be employed against us by those British journalists who have charged the profession of America with being 'always on the look out for the new lights rising over the old world,' and as too hastily adopting 'as the pure gold of science, the crude lucubrations &c.,' as heretofore mentioned.

The Quarterly Summary of the Transactions of the College of Physicians of Philadelphia, for the preceeding two months ending June 4th, contains a most admirable biographical memoir of the late lamented Doctor Moreton Stillé, a subject eminently worthy the tribute of high professional and personal respect which his friend, Dr. Samuel L. Hollingsworth, thus pays to his memory.

The memoir deserves to be read by every young man engaged in, or just entering professional life, and we hope that it may be published in a form accessible to all.

Although somewhat out of place here, we cannot resist the temptation to quote Dr. Hollinsworth's closing words:

"But why should I prolong these vain regrets? Why grieve that one whose morning seemed to herald so bright and sunny a future, should have entered, ere its meridian, into the shadow of the dark valley? Brief as his life was, he lived not in vain. Within the circle of his peaceful years, all was gentleness, industry, and devotion to duty. Every step was a step of power, and higher culture, and more perfect attainment. Who can estimate the moral uses, the determining influence of such a character! Like the gentle rain from Heaven, it sheds its benign blessings on all around, and the seeds which it nourishes contain within themselves the germs of harvests that shall bloom here, and in the world to come, forever."

From a note appended to the reprint of Dr. Bozeman's original paper on 'Vesico-Vaginal Fistule,' taken from the first No. of this journal, we see that that gentleman has now operated *sixteen* times with the button suture, and had but one partial failure. His success, so far as we can learn from an examination of the literature of the subject, very much exceeds that of any other surgeon in the world.

JEFFERSON MEDICAL COLLEGE, PHILADELPHIA.--We have received the announcement of this institution for the session of 1856–57, accompanied by a catalogue of its graduates from the first commencement, held in 1826, to that of 1856 inclusive. From this it appears that the total number of graduates is 3,597, representing all the States and Territories of the United States, the British Provinces of North America, and a number of the States and Kingdoms of Europe.

PENNSYLVANIA MEDICAL COLLEGE, PHILADELPHIA.—The catalogue of this school for the session of 1855–56, shows the names and residences of 137 pupils. The announcement for the present session will be found on the cover of this journal.

We see it stated that a Dr. Mattson, Fellow of the Massachusetts Medical Society, and a member of the Boston Medical Association, has recently patented an elastic syringe. Will the Society and the Association expel him? Nous verrons.

The Howard Association of Norfolk has presented gold medals to each of the thirty surviving physicians out of the eighty who went there and lent their aid to the sick of that city and Portsmouth, during the terrible epidemic of yellow fever last year.

We are pleased to learn that Dr. B. H. Washington, of Hannibal, Mo., has published a monograph on Assimilation, Consumption, and Scrofula, made up of two articles which originally appeared in the Nashville Journal of Medicine, They have attracted the attention of some of the most respectable of our contemporary journalists and have won their approbation. Among these we notice that Dr. Hunt, the accomplished editor of the Buffalo Medical Journal, publishes several very interesting cases, which strongly confirm the truth of Dr. Washington's views.

We have not, now, sufficient space to notice Dr. Washington's Monograph in the terms it deserves, but we shall endeaver to give an analysis of it in our next number; but, we would, in the meantime, commend to our readers the purchase of this valuable little treatise. It is a philosophical investigation of all the phenomena of consumption and scrofula, and while it does not purport to offer a medicated panacea for the universal cure of the diseases, only to be obtained from the inventor, whose signature must be observed, it does better; it points to paths of recuperation and of recovery that are worthy the attention and confidence of the afflicted.

By a singular coincidence both the editors of this journal have accepted appointments to medical schools in Philadelphia. We are happy to be able to inform our readers, however, that the only change which the Review will experience, will be in the removal of the office of publication. The objects for which we established the Review are as dear to us now that we are about to leave the West as they ever were, and we hope by the increased advantages afforded by a residence in Philadelphia to be able to carry them out with much more satisfaction both to ourselves and to our friends. It is mainly to the South and West we shall still look for sympathy and aid, and we pledge our earnest endeavors to render them an abundant return.

The present title of the work will necessarily be continued on the cover until the end of the year.

Prof. Owen has been appointed the head of the Natural History Department of the British Museum with a salary of four thousand dollars a year.

Prof. Willard Parker, of the College of Physicians and Surgeons, New York, has been appointed Attending Surgeon to the New York Hospital, in place of Dr Cheeseman, resigned.

Our exchanges will very much oblige us by noticing the transfer of our office to Philadelphia.

This seems to be a year of change in the organization of medical school faculties in this country. To the long list sf resignations and acceptances reported in our last number, we have to add the following: In Philadelphia, Dr. J. M. Allen has resigned the chair of anatomy, and the junior editor of this journal has been appointed his successor. In New York, Dr. Samuel St. John, late professor of chemistry in the Cleveland Medical College, succeeds Mr. La Conte in the College of Physicians and Surgeons; Dr. E. H. Parker, of the New York Medical College, has resigned the professorship of anatomy, which has been filled by the appointment of Dr. Timothy Childs, of Pittsfield, Mass. The Nashville School has lost, by death. Dr. Robert M. Porter, professor of anatomy, whose post has been taken by Dr. Jennings, of the same school—the faculty, having previously consisted of eight members, is thus reduced to the usual number. In this city, the Kentucky School of Medicine after several mutations has settled down upon the following organization: Dr. Middleton Goldsmith, late of the Castleton Medical College, professor of Surgery; Dr. L. Powell, Obstetrics; Dr. John Hardin, Theory and Practice; Dr. Henry Bullitt, Physiology; Dr. N. B. Marshall, Materia Medica, and Dr. Charles A. Wright, Chemistry. In Cincinnati, Dr. L. M. Lawson has been again added to the corps of teachers in the Medical College of Ohio.

But the most remarkable, and to an uninterested looker-on the most amusing appointment that we have ever heard of, is that of Dr. Joshua B. Flint to the chair of Surgery in the University of Louisville.

We are requested to call the attention of our Mississippi friends to the fact that a number of medical gentlemen, in different parts of the State, have agreed to meet in Jackson on Monday, the 13th of December next, for the purpose of organizing a State Medical Society. Of the great benefits accruing to the profession from organizations of this kind, it is unnecessary to speak, and we hope to hear of a large attendance at Jackson next winter.

At the last meeting of the Pennsylvania State Medical Society, Dr. La Roche, of Philadelphia, was chosen President for the ensuing year.

Personal.—The Senior Editor of this journal will remain in Louisville until the 28th inst., and the Junior Editor until the 1st of Oct. We take this opportunity, also, to say to our friends that it will give us pleasure to render them any services within our power in the new home to which circumstances have so unexpectedly called us.

NECROLOGICAL NOTICES.

The recent death of Dr. ROBT. M. PORTER, Professor of Anatomy in the University of Nashville, is doubtless already familiar to most of our readers. We copy the following tribute to his memory from the Nashville Medical Journal:

"Since our last issue the grave has claimed our friend and colleague, Dr. R. M. Porter. Those who have so often looked upon his manly form and pleasant face in the amphitheatre, in society and at the sick bed, will see him no more forever. Of all the men we have ever known he was the most unobtrusive and unpretending. A scholar in the most circumscribed and rigid acceptation of the term, and MASTER in ALL of the learned professions, he walked about among men with maiden modesty and the frankness and simplicity of childhood. A nobler heart never pulsated in the bosom of man, for he was the very soul of honor. The last of the following resolutions of the faculty will explain why we do not extend this article. Full justice will be done this truly great man by a far more able hand than wields this pen, which, nevertheless, is ready to exalt the memory of one whom, as a man, we loved, as a colleague we admired in full and abiding confidence, and as a brother, had our warmest sympathies and our most exalted regard."

Tribute of Respect to the Memory of Dr. Robert M. Porter.

At a meeting of the physicians of Nashville, Dr. Boyd McNairy being called to the chair, and Dr. G. A. J. Mayfield appointed secretary, on motion of Dr. J. D. Winston, the chair nominated a committee to draft resolutions in relation to the death of the lamented Dr. Robert M. Porter, consisting of Drs. Atchison, Morton, and Nichol, who reported the following, which were adopted:

Whereas, It has pleased Divine Providence to remove from our midst our friend and brother, Dr. Robert M. Porter, we who have shared his toils, and witnessed his unsparing devotion to the highest and holiest duties of a self-sacrificing profession, may be permitted to voice our grief for his untimely loss. He has been cut down in the prime of manhood, in the ripeness of intellect, and in the zenith of usefulness. In him, suffering humanity has lost a friend, society an ornament, and science an ardent devotee. With wealth, he preserved the meek spirit of a Christian; with learning, the modest simplicity of a child; neither pride of place nor consciousness of superior intellectual attainments ever made him forgetful of those kindly courtesies and gentle amenities, which so distinguished his private and professional intercourse. In early life, he entered the academic halls of his native State, and won the highest honors; going thence to Cambridge, hè entered upon the study of law, enriching his mind with its broad principles; he then turned his attention to the higher walks of Divinity, where the purity of his heart found its congenial affinities. But that modesty for which he was so distinguished, deterred him from the pursuit of a profession requiring a prominence from which he shrank; he next turned his attention to the study of medicine, and in its quiet and unobtrusive walks, its labors of love, and unheralded triumphs over disease and death, found that theatre of action best suited to his unpretending modesty, active philanthropy, and Christian benevolence. As an expression of our appreciation of his worth as a man, his ripe attainments as a scholar, and usefulness as a physician, be it, therefore,

Resolved, That, in the death of Dr. R. M. Porter, society has lost an exemplary Christian, science a bright ornament, and our profession one of its most honored and esteemed members.

Resolved, That, while we refrain from obtruding stereotyped expressions of condolence upon the afflicted family, we may be permitted to mingle our sincere sympathies with their deep sorrow for a bereavement so untimely, so mournful, and so irreparable.

Resolved, That, in testimony of respect for the deceased, we wear the usual badge of mourning for thirty days.

"Dr. ERNEST CLOQUET, nephew of the brothers Hippolyte and Jules Cloquet, the former the most famous of anatomical lecturers, the latter a brilliant surgeon, died recently in Persia, where he resided as physician to the Shah. His death is said to have been caused by an overdose of cantharides, taken by mistake. We are indebted to this physician for interesting observations on oriental diseases, and on the state of medicine in the East."

"Dr. JAMES G. PERCIVAL, the gifted poet, died on the 2d of May, at Hazelgreen, Wisconsin, in the 61st year of his age. Although it was long since he abandoned the practice of medicine, we cannot but remember with pride that he was a member of our profession, nor fail to express our respect for his memory. Percival was born in Kensington, Conn., in 1795. He was the second son of Dr. James Percival. He graduated at Yale College, in 1815, reading as a commencement exercise, his tragedy of "Zamor." In 1820, having graduated in medicine, he commenced the practice of his profession in Charleston, S. C. He did not succeed, however, and obtained, in 1824, an assistant surgeoncy in the army. He served for a while at West Point, and subsequently as examiner of recruits at Boston. But he soon left the service and his profession. He published two volumes of poems, which were reprinted in London in 1824. In

1827 he published a third volume. The next two years he spent in assisting in the first quarto edition of *Webster's Dictionary*. He then translated Malte-Brun's *Geography*. He was a good naturalist, and his attention became gradually more and more concentrated on geology. In 1842 he published an elaborate report on the geology of Connecticut. In 1853 he was chosen State Geologist of Wisconsin, and at once went to work in that new and interesting field. He was a very superior man."

"HENRY CLUTTERBUCK, M. D., died in London on the 24th of April, 1856, aged 89 years. Dr. C. was, for nearly seventy years, an active member of the profession, during all which period his life was one of steady and continued industry. For fifteen years he edited the *Medical and Chirurgical Review* (1795–1809,) and was the author of several valuable works. He was three times President of the London Medical Society, and for upwards of sixty years attended its anniversary meetings.

Died, in Cincinnati, on Thursday morning, the 10th ult., at half past eight o'clock, after a protracted illness, Prof. JOHN LOCKE, in the 65th year of his age. Dr. Locke was born on the 19th of February, 1792, in Freyburg, Me. After acquiring a preliminary education in his native State, he entered Yale College, where he pursued his studies with distinguished ardor, and received his degree. He subsequently removed to the West, and in 1837, was appointod to the Chair of Chemistry in the Medical College of Ohio, which he filled with great ability until 1853.

BI-MONTHLY BIBLIOGRAPHICAL RECORD.

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UNIVERSITY OF NASHVILLE.--MEDICAL DEPARTMENT.

SESSION 1856--57.

THE SIXTH ANNUAL COURSE of Lectures in this Institution will commence on Monday, the 3rd of November next, and continue till the first of the ensuing March.

PAUL F. EVE, M. D., Professor of Principles and Practice of Surgery.
JOHN M. WATSON, M. D., Professor of Obstetrics and the Diseases of Women and Children.
W. K. BOWLING, M. D., Professor of Institutes and Practice of Medicine.
A. H. BUCHANAN, M. D., Professor of Surgical Anatomy and Physiology.
C. K. WINSTON, M. D., Professor of Materia Medica and Medical Jurisprudence.
J. BERRIEN LINDSLEY, M. D., Professor of Chemistry and Pharmacy.
THOMAS R. JENNINGS, M. D., Professor of Anatomy.
WILLIAM T. BRIGGS, M. D., Adjunct Professor of Anatomy.

The Anatomical Rooms will be opened for students on the first Monday of Oct.

A full Preliminary Course of Lectures, free to all students, will be given by the Professors, commencing also on the first Monday of October.

The Tennessee State Hospital under the direction of the Faculty is open to the Class free of charge.

A Clinique has been established in connection with the University, at which operations are performed, and cases prescribed for, and lectured upon, in presence of the class.

Amount of Fees for Lectures in the University is $105. Matriculation Fee, (paid once only,) $5. Practical Anatomy, $10. Graduation Fee, $25.

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MEDICAL COLLEGE OF OHIO.

SESSION OF 1856--57.

THE THIRTY-SEVENTH ANNUAL COURSE of Lectures will commence on the 15th day of October, and continue until the last day of February.

L. M. Lawson, M. D. Professor of the Theory and Practice of Medicine.

George C. Blackman, M. D., Professor of the Principles and Practice of Surgery and Clinical Surgery.

Thomas Wood, M. D., Professor of Anatomy.

N. T. Marshall, M. D., Prof. of Obstetrics and Diseases of Women and Children.

James Graham, M. D., Professor of Materia Medica and Therapeutics.

John H. Tate, M. D. Prof. of Physiology, Hygiene, and Medical Jurisprudence.

John A. Warder, M. D., Professor of Toxicology.

S. G. Armor, M. D., Professor of Pathology and Clinical Medicine.

R. L. Rea, M. D., Demonstrator of Anatomy.

Fees for the whole Course, $72. Matriculation (paid once only,) $5. Hospital, $5. Graduation, $25. Demonstrator's Ticket, $5. Board, $2 50, to $3 a week.

A Preliminary Course, free to all Students, will commence on the 1st of October, and continue until the commencement of the regular Session.

Clinical Instruction by the Professors of Clinical Medicine and Surgery will be given daily at the Commercial Hospital.

Students may rely upon an abundant and *prompt* supply of *material.*

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S. G. ARMOR, M. D., 87 Seventh st., Dean of the Faculty.
THOMAS WOOD, M. D., Registrar.

STARLING MEDICAL COLLEGE, COLUMBUS, OHIO.

THE Tenth Annual Course of Lectures in this Institution will commence on the 15th of October, and continue full five months.

FACULTY.

S. M. Smith, M. D., Professor of Theory and Practice, and Dean.

F. Carter, M. D., Prof. of Obstetrics and Diseases of Women and Children.

John Dawson, M. D., Professor of Anatomy and Physiology.

J. W. Hamilton, M. D., Professor of Surgery.

Theo. G. Wormly, M. D. Professor of Mat. Med. and Medical Jurisprudence.

R. N. Barr, M. D., Demonstrator of Anatomy.

Terms.—Lectures, $60. Matriculation, $3. Graduation, $20. Board, Lodging, &c., $2 50 to $3 per week.

By a law passed at the late session of the Legislature, Students of this Institution are admitted free to the Hospital of the Ohio Penitentiary, this furnishing one of the best Clinics in the country.

For further information address

S. M. SMITH, Dean.

PENNSYLVANIA COLLEGE.

MEDICAL DEPARTMENT.

SESSION OF 1856--57.

THE REGULAR COURSE OF LECTURES will commence on Monday, October 13th, and will be continued until the 1st of March.

FACULTY.

DAVID GILBERT, M. D., Professor of Obstetrics and Diseases of Women and Children.

ALFRED STILLE, M. D., Professor of Theory and Practice of Medicine.

JOHN NEILL, M. D., Professor of Surgery.

T. G. RICHARDSON, M. D., Professor of General, Special and Surgical Anatomy.

JOHN J. REESE, Professor of Medical Chemistry.

JOHN B. BIDDLE. M. D., Professor of Therapeutics and Materia Medica.

FRANCIS G. SMITH, M. D., Professor of Institutes of Medicine.

H. W. DESAUSSURE FORD. Demonstrator of Anatomy.

Clinical Instruction will be given by Professors BIDDLE and NEILL at the *Philadelphia Hospital, Blockley,* during the entire term of the session, in conjunction with other members of the Medical Board of the Hospital. The Students of Pennsylvania College—both *first-course* and *second-course*—will be furnished *gratuitously* with the ticket to the Philadelphia Hospital. Second-course Students have the option of receiving gratuitously the ticket to the Pennsylvania Hospital. A Clinic will also be held at the College every Wednesday and Saturday morning throughout the session.

FEES.—For the entire Course of Lectures, $105. Matriculation, (paid once only,) $5. Graduation, $30.

The Dissecting Rooms will be opened in September, under the direction of the Professor of Anatomy, and the Demonstrator.

Preliminary Lectures will be delivered during the fortnight preceding the opening of the session.

JOHN J. REESE, M. D., *Registrar,*
No. 342 Walnut Street below 13th, Philadelphia.

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S. Thompson, M. D., Albion, Ill.
E. Williams, M. D., Cincinnati, Ohio.

BOOKS AND PAMPHLETS RECEIVED.

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Smith's Practical Surgery.	J. B. Lippincott & Co., Philadelphia.
Agnew's Practical Anatomy.	do.
Carpenter's Microscope and its Revelations.	Blanchard and Lea, Philadelphia.
Dunglison's Physiology. 8th edition.	do.
Dunglison's New Remedies. 7th edition.	do.
Churchill's Diseases of Infants and Children. 2d ed.	do.
Taylor's Medical Jurisprudence.	do.
Lehmann's Practical Chemistry.	do.
Allen's Practical Anatomist.	do.
Wilson's Dissector. 3d edition.	do.
Bennett's Uterine Pathology.	do.
Lyman's History and Statistics, of Ovariotomy.	From the Author.
Velpeau's Surgery, 4th edition.	S. S. & W. Wood, New York.
Beck's Materia Medica.	do.
Bedford's Diseases of Females.	do.

We must again call attention to the fact that the office of this Journal has been removed to Philadelphia. Exchanges, Books, and Letters should be addressed to the Junior Editor, Pennsylvania Medical College.

THE

LOUISVILLE REVIEW.

NOVEMBER, 1856.

PART FIRST.

Analytical and Critical Reviews.

Art. I.—*The Diseases of the Heart and the Aorta.* By William Stokes, Regius Professor of Physic in the University of Dublin; Author of "The Treatment and Diagnosis of Diseases of the Chest," &c. Philadelphia: Lindsay & Blakiston, 1855. Pp. 710. 8vo.

If the number of the *Bridgewater Treatises* had been increased, the Heart might well have been chosen for the subject of one of them; evincing, as it does, not only a wise design and contrivance in its mechanism, but also, during the exercise of its functions, powers of resistance to causes of disturbance and derangement which are constantly occurring to every human being, and, although in less degree, to every warm-blooded animal. From birth to death, during several decades, this organ knows no rest; nor is it allowed to perform its work at a uniform rate of contractions, either as to number or force. In the sports of youth, and in the labors and toil of manhood, it is often hurried beyond measure, or is subjected to excessive strains which lay the foundation for long and lingering disease. How common for it to throb wildly and tumultuously, as if it would burst its bony casement, after potations of alcoholic poison in the evening, and to beat languidly and with effort in the succeeding morning; suffering, in the first instance, from a stimulation; in the second, from a narcotic operation. Working similar, but less suspected mischief, are the various passions and emotions of the mind—fierce anger, bitter hate, gnawing envy, jealousy, ambition's honors lost, or not won after long and eager trials, corroding care and paralyzing grief—which all discharge themselves, in turn, with electric force and rapidity, from their original seat, the brain, on the heart, unduly increasing or retarding and perverting the regular or rhythmic motions of the latter organ. Even in the daily routine of life, what tugs are made on the poor heart, by misplaced or crossed affections, the eager struggles of ambitious rivalry in the walks of the professions, and in the arena of controversial literature and of politics. Commerce, also, with its sudden gains and equally sudden and ruinous losses, sensitively alive to all the fluctuations of foreign and domestic policy, and suffering from unlooked-for devastations by the rage of the elements, and from the failure of expected crops, must keep its followers in a state of continued anxiety, with doubts, hopes, and fears chasing each other in quick succession; while the heart is now beating with violence, now in spasmodic struggles, barely able to discharge the blood with which its cavities are oppressed. The heart, moreover, beats with increased frequency and force, responsive to irritation in every other organ and tissue of the body; and sometimes, by its sympathy in this way, it gives the only intimation of some hidden mischief going on in the interior. Though such irritations may not cause organic affections of the heart, they not unfrequently develop into fearful activity chronic, or otherwise quiescent, structural diseases of this organ.

The series of causes just sketched act injuriously on the heart, not only by disturbing its mechanical movements, but also by attacking the very material of which it is made—as when the blood, which is intended to nourish it, and to bring fresh substance to make up for that which is wasted and worn, is itself so altered as to be deprived of its plastic and nutrimental properties, by the deterioration and almost poisoning which it undergoes from the strong commotions of the brain and nervous system. In this way the muscles of the heart lose a portion of their contractile power, and the organ is thrown into a state analogous to the softening of its tissue, produced by the poison of typhus fever, and the exanthemata, particularly smallpox and scarlatina.

More frequently still is the heart made to suffer from impediment to its functions, and from violent and painful diseases, by changes taking place in the structure of the membranes which invest and line it, and the continuation of these in the valves which are necessary to the full expulsive action of the great centre of the circulation. These membranes (*pericardium* and *endocardium*) sometimes take on primary inflammation, with its sequences, in common with membranes in other parts of the organism; and often they are attacked secondarily, as after rheumatism or gout, which, leaving the fasciæ of the joints, suddenly flies to the heart, to the danger of the life of the individual, and always at the cost of much suffering. The cardiac diseases of a membranous character are brought on, in addition to the metastasis of rheumatism, by atmospheric extremes and alternations, errors in regimen, as of excessive alimentation and the free use of alcoholic liquors.

Bearing in mind this mere outline of the numerous and diversified causes of heart disease in some form or another, to which all mankind are more or less exposed, he who has reached the fiftieth year of his life with a sound heart (we speak now in the language of physiology, not of ethics or of sentiment), ought to kneel in prayer and return thanks with all the fervor of gratitude for his happy exemption. Next to the gratitude for entire escape from bodily ills, ought to be the strength of this feeling for the wise and deep studying men who tell us of the signs of the approach and presence, and the means of mitigating the violence of these ills, if not of removing them entirely. In the front rank of these teachers of cardiac pathology and clinics is Dr. Stokes, whose work on the *Diseases of the Heart and the Aorta*, now before us, has suggested the preceding reflections; and, still better for our readers, will furnish the staple of the following review.

Since Corvisart applied percussion, and Laennec auscultation to the diagnosis of cardiac diseases, the study of the subject has been prosecuted with a perseverance and success alike gratifying to the inquirers themselves and singularly beneficial to the sick. But in this, as in other subjects of still greater magnitude, the progressive acquisition of new, leads to the neglect if not abandonment of old ground; and it becomes a question whether our resources and our power are augmented by additions made on such terms. We are, just now, in this state of doubt in regard to the value of the means commonly resorted to, with a view of ascertaining the precise nature of the organic changes to which the heart is subjected in its various diseases. The satisfactory determination of physical signs by the aid of percussion and auscultation has produced a too complacent reliance on this branch of diagnosis, to the neglect, in many instances, of the physiological signs, which, in studying the phenomena of the living organism, ought always to be regarded as of paramount importance. When the two series—the symptoms and the signs—harmonize, both diagnosis and semeiology are as nearly complete as we can possibly expect. But when there is a want of agreement between them, the conclusions drawn from the physiological ones are entitled to preference, as giving not only an indication of the state of the suffering organ, but also of the sympathetic and associated disturbances in other parts, which may, of themselves, imperil the life of the patient. We are aware that any appearance of undervaluing, even by implication, the importance of physical signs, is regarded with mistrust by those who have thrown themselves, perhaps, too exclusively into this line of investigation; and who may insinuate doubts of the knowledge of physical diagnosis on the part of those who are not as sanguine and exclusive as themselves.

On this point we may safely take the opinion of Dr. Stokes, himself a master of physical diagnosis, who, most assuredly, cannot be accused of underrating its merits by any lack of knowledge of all the bearings and applications of the subject. The question is met by the author at the very threshold of his work. He tells us, in the Preface, that "it is not intended as a full treatise on Cardiac Pathology, nor yet on Physical Diagnosis, but it aims at the rational application of these branches of knowledge to Practical Medicine." Reference is then made to the effect produced on the mind of "the inexperienced man" by "many admirable works on Cardiac Pathology and Diagnosis."

> "This deficiency in clinical knowledge makes him overlook the great fact of the complication of disease. He applies to a complicated case rules of diagnosis in which the isolation of disease is assumed; and while their apparent simplicity makes him confident in his powers, their inapplicability to the case in question leads him into grievous error. The diagnosis of the combinations of disease, even in so small an organ as the heart, is still to be worked out; and until this be done, the rules of physical diagnosis founded on the presumed isolation of disease, must be used with great caution."

And again:—

> "I desire, also, to enter a protest against the tendency, still too prevalent in many schools, which would base the diagnosis of disease in great part, if not entirely, on the consideration of purely physical signs, to the exclusion of that important class of phenomena which, for want of a better name, we are obliged still to call vital. For there is nothing more calculated than this to cause the neglect of this first and greatest lesson in Medicine, which, while inculcating modesty and caution in diagnosis, makes us bring every possible light to bear on the case before us.
>
> "As the student, fresh from the schools, and proud of his supposed superiority in the refinements of diagnosis, advances into the stern reali-

ties of practice, he will be taught greater modesty and more wholesome caution; he will find, especially in chronic disease, that important changes may exist without corresponding physical signs; that as disease advances, its original special evidences may disappear; that the signs of a recent and trivial affection at one portion of the heart may altogether obscure or prevent those of a disease longer in standing, and much more important; that functional alteration may not only cause the signs of organic lesion to vary infinitely, but even wholly to disappear; that the signs on which he has formed his opinion to-day may be wanting to-morrow; and lastly, that to settle the simple question between the existence of functional and that of organic disease will occasionally baffle the powers of even the most enlightened and experienced physician."

Words, these, full of wisdom, as teaching a proper caution against hasty deduction from imperfect premises. With all the knowledge that we can collect, there will still be room for some hesitation. Physics will help us, and chemistry will help us, but neither physics alone, nor chemistry alone, nor both united, will of themselves solve any single problem of function in physiology, or explain its derangements in pathology; still less any series of associated vital actions. To obtain some of the desired results, the old field of observation must be re-entered, and old tomes of record turned over, in which vital phenomena are the theme, and the sages of all time, who have studied disease under all its visible aspects and changes, are our guides.

Dr. Stokes, in the body of his work, furnishes evidence to enforce every care and caution against hasty diagnosis in cardiac diseases which he lays down in the preface. Thus, for example, when speaking of the seat of endocarditis, on the left side of the heart, and its principal signs being chiefly developed at the orifices, he says: "It follows that the chief grounds for its diagnosis will be the recent production of mitral or valvular murmur in cases where the local and general phenomena are indicative of cardiac irritation." But, two pages farther on (p. 118), he frankly admits that—

> "The symptoms of endocarditis are not yet fully ascertained, and it is doubtful whether its diagnosis will ever be established with the same accuracy as that of pericarditis." And again, at p. 124: "That there is no pathognomonic sign of its existence." "That the development of valvular murmur is not necessarily a consequence of this disease—at least in its more acute stages."

The same is said by Dr. S. of extreme and chronic diseases of the valves. It will be borne in mind by our readers, in order that they may see the relevancy of speaking of valvular sounds in connection with endocarditis, that not only the physical signs of this disease, but also its more obvious pathological changes, are confined to the valves. We continue the citation of further proofs of the difficulty of drawing satisfactory inferences from physical signs alone, and of the fallacy of exclusive reliance on them in forming our diagnosis. There may be great valvular disease, by new deposits, without any warning murmur; and there may be fixed murmur with an absence of functional disturbance, or at least of such as interferes with the business and amusements of the person whose heart gives rise to them. In illustration of the first of these two propositions, we find a case related by Dr. Stokes (p. 122–3), in which there was dilatation and hypertrophy of the heart and ossification of the mitral valves unattended by murmur. The author, in describing this case, makes the remark, that the existence of considerable ossific deposits in the valves, yet without the production of murmur, is a fact well known to clinical observers. Murmur heard in the early period of fixed valvular disease is often lost entirely as this advances. In another case recorded by Dr. S. (p. 159), neither he nor others observed any murmur; and yet extreme valvular obstruction was found on dissection. In certain cases, we are met with the startling semeiological paradox, that a diminution, and ultimately a disappearance of the murmur, so far from indicating any cure or diminution of the disease, is rather an evidence of its increase. Sometimes, however, on a chronic disease of the valves may supervene acute endocarditis, with murmur. But the little expectation of having physical signs to help us in the diagnosis of chronic valvular disease, may be inferred from the remark of the author, that "a long process of progressive disorganization has in all probability been going on before the mechanical conditions of the parts are so altered as to cause distinct physical signs."

A question of legal medicine comes up here, which is well set forth and elucidated by Dr. Stokes. As one of practical interest, we place it before our readers in the words of the author:—

"The recent development of the signs of a chronic long pre-existing disease is a circumstance which should be known to all who are concerned in the medical examinations for life insurance. Thus it may happen a life is passed as insurable after a careful examination; the insurance is effected; and yet in a short time the individual exhibits all those signs of *morbus cordis* which are supposed to indicate chronic disease. He may die of this disease within a few months after the completion of the insurance, and the payment of the sum insured be then contested on the ground that the disease was overlooked. I have known all the signs and symptoms of permanent patency of the aortic valves to occur within a few months after the effectuation of a large insurance, and yet at the period of the medical examination, which was made by one of the first observers in this or any other country, no sign of disease of the heart existed. In the same way I have known the signs of chronic mitral disease become most strongly developed in the course of a few days. These facts are of practical importance, for, in the case of a judicial trial, on the ground of the incompetency or neglect of the medical examiner, many professional witnesses would incline to the opinion that the affection had been overlooked, rather than that it had become developed in so short a time after the examination. They would be influenced by the opinion that the development of the disease and of its symptoms and signs are concurrent, a doctrine which we have seen to be untenable in acute, and, of course, far more in chronic disease." P. 163.

That a large measure of health may be enjoyed by persons in whom valvular disease to a great extent, but coming on slowly, has existed for a length of time, is shown in cases recorded in the volume before us. The heart, on such occasions, seems to have a power of adaptation so as to accommodate itself to the change, and to carry on the function of circulation without manifest derangement. "But, on the occurrence of any general disturbance of the system, the signs and symptoms of a diseased heart are suddenly developed." A young man "engaged in an active profession," who had been accustomed to active exercise on horseback and on foot, and who was in the habit of drinking wine freely, told Dr. Stokes that he never felt any palpitation or uneasiness about the heart until after the time at which he had been forbidden to use stimulants or active exertion. This course had been enjoined on him by his then medical adviser, on the discovery of disease of the valves of the heart, in an exploration of the chest made with a view of determining the extent of a bronchitis under which he was laboring. Dr. Stokes, taking into account the previous good health and habits of this patient, and the fact that no symptoms of pericarditis or endocarditis had been observed in connection with the attack of influenza, and also, that the general health and even the condition of the heart appeared to have suffered by the change in his mode of living, suspected that this murmur was indicative of some old, passive, and stationary valvular disease; and this suspicion was converted into a certainty by the patient informing Dr. S. that seven or eight years previously he had suffered from a severe attack of rheumatic gout, which affected many of the joints. There could hardly be a doubt that the murmur was established at this time; but that the diseased action had not been progressive. Dr. Stokes reassured the patient, and dissuaded him from giving up his profession; and the use of stimulants was also allowed in moderation. Smoking was forbidden. A year elapsed, and the patient, on presenting himself to his medical adviser, was found to be much improved in appearance and spirits, while the physical signs of the heart remained unchanged. Dr. Stokes saw him annually for several years, and always found him in the same state of full health.

> "On the last occasion but one he had just returned from a shooting excursion in the Highlands of Scotland, which had occupied nearly a month. During this time he was on foot, walking over mountains for eight hours a day, carrying a heavy gun and shot-pouch, and using a liberal allowance of diffusible stimuli; yet he never experienced any difficulty in respiration. When I saw him he was in the highest state of health and spirits. It is now more than a year since I have seen this gentleman; he was then in perfect health, although the murmur continued unchanged." P. 166.

The advice which concludes the account of this case ought to be known and treasured up in the minds of those practitioners, and they are numerous, who think that the asking of their opinion of the nature of a disease implies, as a matter of course, an obligation on their part to prescribe active measures, or to recommend a change of treatment.

> "That this individual," continues Dr. Stokes, "has had a continued mitral murmur for upwards of twelve years, there cannot be any reasonable doubt; and the case is strongly illustrative of this principle in practice—that we are not to confound the effects of a disease with the disease itself; and again, that we are not rashly to change the habits of living, as to exercise and the use of stimulants, in a patient who has been the subject of a chronic local disease, if we find that under the regimen in question the local disease has not been progressive, and that the general health has remained unimpaired.
>
> "Other cases might be adduced of the long continuance of a murmur in the heart without any special symptom of disease, and we may even see men, with a loud rasping murmur continuing for years, who are yet able to take violent exercise. I knew a gentleman who was advanced in life, and who had to my knowledge a loud and rough murmur for four years, yet during each season he rarely missed a day's hunting, and was a bold and fearless rider."

The question may be asked, in reference to this case of the professional gentleman, who was so fond of shooting and active exercise on horseback, and who was not backward in the use of diffusible stimuli, whether such a course of life might not have had a share in bringing on the morbid condition of the heart which has been described? Persistence in this course, like certain favorite plans of medication, may rather show the powers of toleration of an organ than its being benefited in consequence.

The combination of organic and anemic murmurs offers a puzzling problem, the solution of which, at first, is, to use the words of the author, "simply impossible." Cases are adduced in illustration of this point. When a murmur is present, the author asks:—

> "But does the state of our knowledge of the signs of cardiac disease, and of vital acoustics, justify us in making an absolutely positive diagnosis, not only of the seat of the murmur, but of the nature of the disease, and the calibre of the orifice. This question must be answered in the negative, and we must receive as unproved and calculated to throw discredit on the science of diagnosis, all those rules and descriptions of special phenomena supposed to apply not only to almost every pathological change of the valves, but every possible combination of these changes." P. 196–7.

The condition of the valves constitutes so large and important a part of cardiac pathology, implicated as they are not only primarily but, still oftener, as secondary affections, supervening on endocarditis, and aggravating if not causing hypertrophy, that we make no apology for thus following the author into the body of his work on the theme furnished in the preface, in order to draw therefrom the caution and qualifying circumstances which ought to guide the practitioner in forming his diagnosis. We shall now carry out our original intention of taking to a more methodical, but for want of room it must be a necessarily imperfect, notice of the entire volume, which opens with the subject of "Pericarditis."

Of the three forms of inflammation of the heart and its membranes, described by authors—namely, endocarditis, myocarditis, and pericarditis—the last, as correctly remarked by Dr. Stokes, demands especial attention, from its greater frequency, and from the marked character of its signs.

> "Inflammation of the muscular function of the heart, occurring independently of a particular state of either one or both of the investing membranes, must be a very rare affection; and we are still but imperfectly acquainted with the history and symptoms of endocarditis. In most of the severe cases of carditis, the three great structures of the heart are probably engaged; and even though the muscular tissue may not exhibit the evidences of organic change, yet the signs of its irritative excitement and subsequent paralysis are plainly to be recognized. In truth, if we except the pain which so commonly attends serous inflammation, the remaining symptoms of pericarditis are to be referred less to the pericardium than to the muscular fibre."

The state of things here is analogous to the complication, with which we are so familiar, of pneumonia with pleuritis; and to such a degree does this apply, that pleuro-pneumonia is a much more frequent disease than either pleuritis alone, or pneumonia alone. The union of endocarditis with pericarditis, and the signs of the former, especially murmurs, being perceptible after those of the latter have subsided, are alluded to by Dr. Stokes; but he is not inclined to look upon this as a matter of frequent occurrence. A murmur, as we have already shown, does not necessarily indicate progressive valvular disease, which is a not unfrequent result, it will be remembered, of endocarditis.

Pericarditis, which by Corvisart and Laennec, who were so remarkable for their tact and skill in diagnosis, was declared to be so difficult to make out, is now recognized by physical signs which are deemed to be constant and of easy interpretation. "And it must be admitted that, of all the thoracic diseases, there is none of which the diagnosis so much depends on physical investigation." Before we proceed to speak of the aids derivable from this source, let us give the author's division of pericarditis. It consists of three classes: 1. That in which there is but a slight, though general, effusion of coagulable lymph; 2. That distinguished by the secretion of serum in abundance, causing distension of the sac; and 3. That in which, in addition to the preceding conditions, the signs of muscular excitement, if not of myocarditis, are present. In the first form of the disease, there is little to arrest attention; there being an absence of pain, of cardiac excitement, and no special character of pulse, nor any increase of dulness over the heart. Some time elapses before the friction is developed in incipient pericarditis; so that there is this exception to the general principles just before affirmed by the author, of the constancy and easy interpretation of physical signs. This first period is from six to thirty-six hours. But when, by inflammation and exudation, a roughened state of the pericardial, as of other serous membranes, is induced, three classes of phenomena are developed. First, sounds varying in degree, but known under the term of friction sounds. Secondly, phenomena discoverable by the touch, which, when the hand is applied over the inflamed organ, impart the sensation of two surfaces rubbing and grating one on the other. Thirdly, signs discoverable by percussion, more especially, if not solely, when the pericardium is distended by solid, fluid, or gaseous secretions. The most generally recognized change is that evinced by dulness on percussion.

No serous inflammation, it is justly remarked by the author, presents such a variety in the physical constitution of its products as pericarditis; and hence the friction phenomena in this disease are more singular and varied than in peritonitis, or in pleuritis; and they present, in addition, more remarkable changes in a short space of time. With the exception of the leather-creak sound of Collin, and some of the loudest rasping sounds, the friction phenomena are, in general, singularly localized, and are not heard beyond the actual region of the heart.

In many instances, and the fact is worthy of remembrance, if the stethoscope be removed but a single inch from the spot where the sound is heard, it totally ceases, although we still hear the ordinary sounds of cardiac pulsation.

The friction sounds are of course materially affected by the extent of the effused lymph. Before adhesion is begun, the lymph is spread over the whole surface; and the signs of friction, in such a case, are observed, with the systole and diastole, over the entire cardiac region. More commonly, however, friction sounds are given out from one portion of the heart. In the early period, they correspond to the sides of the ventricles; but, after adhesion takes place at the apex and lateral portion of the ventricles, the friction sounds, from being generally extended over the heart, become localized, and often coincide with the base of the heart for a length of time. The friction sounds are modified in a singularly short period by the employment of local antiphlogistic means, such as the application of leeches over the heart, or of a blister, and a poultice. They are changed in a few hours, even from the loudest rasp, with distinct vibration to the hand, into a soft murmur, while the tactile signs disappear. A pertinent question presents itself here, viz: whether the pericardial surface, inflamed and roughened, and the exuded lymph, can be changed, by the means just indicated, in such brief space of time as for them to cease to give out rough friction or rasping sounds. We must look for an explanation to the diminished contractile force of the heart, and the less active attrition, in consequence, of the cardiac with the other or free portion of the pericardium. But even this is scarcely an adequate solution of the difficulty, which leaves on the mind a shade of doubt of the sounds being entirely due to the alleged causes. We make the remark with great diffidence, after this part of the diagnosis of pericarditis would seem to have been so fully established, mainly by Dr. Stokes, and, coincidently by Dr. Watson; both of them carrying out the pregnant suggestion of Collin, who was the first to point out the leather-creak sound. The change so suddenly brought about by the antiphlogistics, although of short duration, enables us to distinguish between the pericardial and the valvular sounds, the latter of which are not thus easily controllable. The difficulty, to the well-educated ear, of distinguishing the two, is not, at any rate, in the opinion of the author, so great as some writers have supposed.

The other modification of the friction sound in pericarditis is produced by pressure. It is of a different nature from that just described, in its causing a notable increase in the loudness and distinctness of the friction sounds; "so that, in a case passing towards cure, we may reproduce, to a certain degree, the harshness and loudness which existed in the earlier periods of the attack." The pressure may be made strongly downwards with the hand while the stethoscope is applied, or by pressing the head on the ear-piece; or an assistant may be made to produce pressure with the open hand over the cardiac region during the application of the stethoscope. The remaining causes of modification of friction sounds are—I. Co-existence of air with the usual products of inflammation. Cases of this nature, of quite an interesting character, are related by the author. In one of these, air found its way, by perforation of the pericardium, from the lungs in one patient, constituting pneumo-pericarditis; and, in another the air passed from the stomach through a hepatic abscess which communicated with the pericardium. II. Cases of modification caused by distension of the stomach with air, and sometimes flatulent distension of the large intestine, which are marked by a distinct metallic murmur; but there is none of the singular emphysematous crackling, the metallic click, or the loud gurgling and churning of air and fluid that have been observed in pneumo-pericarditis. The sounds of flatulent modifications, as we may term them, are easily and promptly removed by the administration of a carminative draught, or a turpentine enema. III. Pleurisy of the left lung is another cause of modification of the friction sound in pericarditis. Here there is no change in the quality of the sounds, but only in their rhythm. Duplication of one of the sounds of the heart, occurring in nervous cases and in actual and threatened inflammation of this organ, is another modification of the friction sounds. Increase of the force and volume of the heart is, also, a modifying cause. Dr. Stokes does not attach the same value to the development of valvular murmur, in recent cases of pericarditis, as an indirect sign of the disease, which Drs. Hope and Watson do.

The signs derivable from percussion chiefly owe their character to the effusion of fluid in the pericardial sac. Half a pint, Dr. Hope assures us, is sufficient to cause a perceptible increase in the line of natural dulness. In such a case, the dulness mounts higher up in the direction of the great vessels than that which proceeds from hypertrophy. The effusion causing this dulness being almost always the effect of inflammation, it happens that the friction sounds precede, and, up to a certain point, coexist with the extending dulness. They then commonly cease, for a time; to reappear when, from absorption of the fluid, the inflamed surfaces are in apposition. So far as it extends, the dulness is complete; and we do not know any means by which, from its mere character, it can be distinguished from that of empyema, or consolidation of the lung. If we find an extending dulness anteriorly, stretching from below upwards, not attributable to disease of the lung, and coinciding with a clear sound in the infrascapular region, we may make the diagnosis of pericardial effusion.

Among the visible signs of what the author calls "eccentric pressure," or dilatation of a part of the thoracic wall, by the distension from the fluid in the pericardium, he mentions: 1. The production of an epigastric tumor, as first pointed out by Avenbrugger; and 2. Dilatation of the precordial region, as first observed by Louis, and so often verified by Bouillaud. Extrusion of the left lung upwards, in a case of pericarditis with extreme effusion, is recorded by Dr. Graves.

The vital symptoms and history of pericarditis are next described by the author: "Practically we may divide cases of the disease into three classes: 1. Latent and trivial. 2. Latent and dangerous. 3. Manifest and dangerous." In reference to the first class, which is of very frequent occurrence, as ascertained by *post-mortem* examinations, made to ascertain the lesions in other diseases of which the persons had died, we cannot hesitate to admit, Dr. Stokes assures us, "that pericarditis is one of the most frequent of the unrecognized and often harmless diseases which affect the human body." It would be wrong, however, if we were to neglect the patient because there is an entire absence of physiological symptoms, and the physical signs are feeble. Sometimes an apparently trivial and latent affection is converted into a more severe form. We repeat, after the author, the term latent, in this connection; but with the reservation that we do not well see how a thing can be latent of which we possess some knowledge—that, for instance, presented by physical signs, however feeble.

In the second class of cases we may make the subdivisions of the complicated, and the uncomplicated or simple forms. Examples of the first are offered in coexisting inflammations of other serous membranes, as in pleurisy and peritonitis; "and again, as when the complication is with a general or essential disease, such as rheumatic fever. To this form it might be better to give the name of secondary latent pericarditis." In cases of acute articular rheumatism and rheumatic fever, if we seek to avoid being surprised by an attack of pericarditis, we should examine our rheumatic patients from day to day with the stethoscope, even though they present no symptoms of cardiac disease. The liability to pericarditis is much greater in proportion to the severity and obstinacy of the fever than to the frequency and movable character of articular rheumatism, or when the joints are the chief sufferers. Pericarditis may be developed at any period of the disease, and even precede the rheumatism. "In most cases the symptoms will be found attended by physical signs of attrition, of effusion, or both, according to the pathological state of the pericardium. The occurrence of bellows murmur is inconstant, and seems to indicate a complication with endocarditis."

Of the general symptoms unattended by rheumatism, the author, following Louis, enumerates, first, pain in the region of the heart, which is frequently attended with a feeling of constriction or weight about the affected organ. This pain is generally less acute than in pleurisy, but sometimes it is agonizing. It may also be felt in the epigastric and interscapular regions. Closely connected with this symptom is that of tenderness on pressure, with or without œdema of the integuments, in the cardiac and epigastric region. In some cases, the pain is intense and lacerating, and referred at first to the middle sternal region, attended with a most powerful sensation of constriction of the chest. Different from the pain in pleurisy, that in pericarditis is not increased by a deep inspiration or by a change of posture. It has been observed to resemble angina pectoris in a remarkable degree. In a case of this simulation, there was discovered, after death, abundant concretion of coagulable lymph in the pericardium, and the sac itself was distended by a large quantity of bloody fluid. Pain, however, is frequently absent, or there is merely complaint of an uneasy sensation, even when the invasion of the disease is attended by sudden and violent symptoms. Difficulty of breathing comes next in importance, in the symptomatology of pericarditis. This may often exist without dyspnœa, although the latter symptom prevailed in a greater or less degree in all the cases which Louis analyzed. Its sudden appearance without any evidence of acute disease of the lung, and its persistence, will distinguish it from that which is met with in empyema, and which generally disappears, or is slight after a certain period of the duration of this latter disease.

Great stress has been laid on the character of the pulse in pericarditis, and yet clinical experience establishes the fact that there is no distinctive pulse in any form or stage of the disease. After this broad and positive declaration, which is repeated after the author, we feel ourselves dispensed from the necessity of repeating the eight varieties of pulse which he describes as those that may be met with. In an advanced stage of the disease the attention of the physician is arrested by an irregular and intermitting pulse, distension of the jugular veins, violet hue of the face, and coldness and œdema of the lower extremities. Increased action of the several vessels has been observed by Dr. Stokes in two remarkable cases, one of which was endo-pericarditis. In both cases there was valvular murmur.

"The risus sardonicus, constriction of the features, faintness, paleness, failure of animal heat, continued jactitation, insupportable distress and alarm, cold perspiration, and, finally, from obstruction of the circulation, intumescence and lividity of the face and extremities, sometimes arising within the last twelve hours of life, are noticed by Dr. Hope as the most important symptoms of the disease in an extreme degree. To these he adds delirium and convulsions in the last stage."

Among the rarer symptoms in pericarditis, authors have noticed the occurrence of maniacal excitement, sudden dissolution of the eye, and lastly, dysphagia. The last is an uncommon symptom, or, perhaps, it ought rather to be called an unusual accompaniment of the disease. We have ourselves seen one example of it in the case of a woman upwards of fifty years of age, of a full habit and with florid complexion. Examination revealed a morbid condition of the heart, and by her own confession she suffered, at times, from pain and oppression in the præcordial region; but our attendance was asked for on account of what she called sore throat. Inspection of the fauces and pharynx failed to reveal any morbid condition of these parts. We saw her but once, and that was in the afternoon or towards evening. She died suddenly in the night. No *post-mortem* examination was made.

Abstracts of cases, twenty-four in number, of the complication of pericarditis with other diseases, are introduced with commentaries, by Dr. Stokes. Adhesion of the pericardium had been spoken of early in the present work. The author is less inclined than Dr. Hope to attach much importance to this change. He does not deny that general adhesion may produce hypertrophy and dilatation; but he doubts that such an effect, or any manifest change in the heart, necessarily, or even commonly follows the conditions indicated. Dr. Stokes might have adduced very striking confirmatory evidence in favor of his belief, by reference to the paper of T. Wilkinson King on "The Harmlessness of Adherent Pericardium." This gentleman shows that, in a tabular view of 665 autopsies, one-third being of females, twenty-nine, or one twenty-third presented the pericardium firmly adherent; "in rude fractions, one-twentieth of males and one-fortieth of females; only four were under twenty years of age. Now of these twenty-nine cases, fourteen appear to have been unattended with material disease of the heart. In three of the fourteen the heart was small; in five, healthy; in six, some simple enlargement existed." Of the remaining fifteen cases, thirteen were complicated with decided or great obstruction in the aorta, its crescents, or the valves generally. In most of these, also, there were grave visceral disorganizations. The liver, the kidney, the spleen, &c., were much affected.

It may not, continues Mr. Wilkinson, be without interest to add, that, in the same series of 665 autopsies, are just twenty-five cases of decided acute, recent, and fatal, or rather final pericarditis, and that of these, ten presented morbidly enlarged hearts with valvular and visceral diseases. Of the rest, four were on the conclusion of phthisis, one of smallpox, one of acute hepatic abscess, one of fractured ribs, and three of general or diffused inflammations. It may be curious to note that the same year of death is, here, the thirty-sixth for adherent pericardium, and the thirty-second for the inflammation, which is mainly incapable of adhesion or repair. In one-twelfth, or 106 out of 1263 autopsies recorded by authors, and noted by Louis, there were some traits of pericarditis. Four hundred and forty-three autopsies of his own give seven of pericarditis and eleven of old adhesion. In another mixed series from journals, amounting to 263, we find thirteen examples, or one-twentieth. The 706 cases together exhibit in one-twenty-third of them proofs of pericarditis Mr. King objects to the conclusion drawn from his inspective records by Mr. Chevers, viz., that atrophy of the heart may result from compression by adherent pericardium. This is the view taken by Dr. Barlow in his Gulstonian Lectures for 1843.

The *treatment* of pericarditis is not laid down with all the clinical precision that might be expected from Dr. Stokes. The reader would infer from his fencing round the antiphlogistic treatment with so many cautions, that venesection and its auxiliaries were the exception, rather than the rule. Hence we are told, not that bloodletting is proper and demanded in "a case of uncomplicated pericarditis in its earlier stages and occurring in a patient whose strength is impaired," but that in such a case a single bleeding from the arm appears, on the whole, justifiable; its repetition being a matter for careful consideration. Although the principles of the treatment of pericarditis in its more violent forms, are acknowledged to be similar to those which guide us in acute sthenic pleurisy, yet, we are told, that the period at which such treatment ceases to be advantageous or safe, arrives much sooner in pericarditis than in pleurisy. The fear, in the disease under consideration, is of weakening the heart, and of the danger of death from syncope. We are also warned against too great losses of blood, on account of the risk of the reaction which follows. The fatal result of some cases of pericarditis is declared to be mainly attributable to a perseverance beyond the proper time in the antiphlogistic course—a truism this, which is applicable to the treatment in every form of phlogosis, and which, while it induces doubt, if not fear of similar results, fails to specify the kind of cases, the symptoms and the collateral points of age, constitution, and previous habits, including those of labor or of indolence; or whether the pericarditis be primary or consecutive. All of these circumstances must modify not a little the treatment. Numerous cases are introduced in this volume to illustrate the pathology of pericarditis as far as relates to changes of structure; but only one case is given to show the effects or success of treatment, and that is one of rheumatic carditis. In it there were two attacks within a period of seven months, and an intervening seizure of apparently nervous palpitation. Recovery ensued under the use of wine.

As a part of the pathology, taking this word in its large and proper meaning, and as modifying the treatment of the disease, its etiology is important; but yet, except incidentally, the author fails to impart the desired information on this point. Its rheumatic connection is referred to; but he is silent as to the fact of its being preceded in many cases by Bright's disease, and he does not seem to have been aware of the investigation of Dr. Taylor on the causes of pericarditis, in which this point is emphatically dwelt on. Of 33 cases of pericarditis, carefully recorded and analyzed by Dr. Taylor, 20 occurred in the progress of acute rheumatism; 1 was probably rheumatic; 10 were complicated with Bright's disease, and 2 others may have had similar complications. If we divide these cases into groups; first, of those occurring in persons previously in good health, or actually laboring under some acute disease; and, secondly, of those occurring in persons in bad health, or laboring under chronic disease, we find a remarkable and important difference in relation to the causes—a fact which must exert no little modifying influence on the treatment of the disease. It appears that, of 16 cases belonging to the first group, all were complicated with acute rheumatism, and none (so far as is known) with Bright's disease; while in 13 cases belonging to the second group, only one was complicated with acute rheumatism; whereas, fully two-thirds were known to be associated with Bright's disease. Deducing our opinions from such facts as these, we are justified in saying that the chief causes of pericarditis are two in number, namely, acute rheumatism and Bright's disease; and thus, under Dr. Taylor's guidance, we make a decided advance in pathology beyond what we are taught by Dr. Stokes and other contemporary writers, and *à fortiori*, by their predecessors. Even if we admit the validity of the arguments of Dr. Taylor in favor of the remote cause of pericarditis, whether the disease have followed rheumatism or Bright's disease, being an altered composition of the blood, we shall still see abundant reason for a difference in the activity of the remedial measures to be adopted in the two groups of cases just mentioned. Considerations of this kind might with great advantage have been introduced by the author of the volume before us, when speaking of venesection in pericarditis, and also of the use of mercury in this disease.

The boldness with which Bouillaud bleeds in pericarditis forms a strong contrast with the caution of Dr. Stokes; and we advert to it without expressing a preference for the French over the Irish practitioner, although the former boasts of his great success by early and free bloodletting, both general and local. The force and regularity of the contractions of the heart, in addition to other circumstances relating to time, and the age and strength of the patient, Dr. Stokes thinks will indicate recourse to a second bleeding without risk.

> "But our great reliance is to be placed on local bleeding, and the best mode appears to be the employment of leeches in relays, beginning with twenty or thirty, and gradually reducing the number on each application. Two or three applications may be made in the twenty-four hours, a warm poultice being employed during the intervals."

Early recourse to calomel is recommended at the same time, the dose being from ten to twenty grains, at long intervals. The language of Dr. Graves on this subject, quoted by our author, is very strong, as in the following passage:—

> "Whenever the most violent attacks of pericarditis are met with copious venesections, repeated leeching, and the rapid ingestion of calomel, few will be lost. If, on the contrary, the practitioner relies solely on the lancet—if, in the beginning, as I have seen done, he applies a blister over the heart, and if he defers the exhibition of calomel, or *insufficiently uses it*, then will he have occasion to regret the consequences, and witness either the speedy death of his patient, or his condemnation to the sufferings entailed on him by adhesions, valvular disease, and the other sequelæ of badly treated pericarditis."

While strenuously urging the use of calomel, no mention is made of the advantages, not to say the frequent necessity of combining opium with it, both to prevent its passing off by the bowels, and to increase its antiphlogistic operation. In phlogosis of all the serous membranes, opium is one of our best therapeutical agents. Dr. Stokes is open to criticism in his neglect to specify the dose or pharmacological preparation, and its union with other articles of the one which he recommends. His pages offer, frequently in a needless iteration of details of a pathological nature, a striking contrast with his generalization in therapeutics, and the entire omission of medicinal formulæ. While bearing our own testimony in favor of calomel being freely and frequently given in pericarditis, we would also suggest the use of colchicum, not only from analogy, but from an experience of its utility in cases of the disease which have come under our notice in hospital practice. The same remark is applicable, with still more force, to tartar emetic combined with opium. Dr. Stokes alludes briefly to the last of these articles, but is silent on the use of the first of them. In rheumatic pericarditis, with excitement of the heart, and attended with valvular murmur, and in pericarditis with excitement of the heart, and attended with valvular murmur and the signs of a progressive liquid effusion, "it will generally be right to use mercury, pushed to salivation," with a view of controlling the pericarditis and preventing a chronic disease of the valves. We have found, however, marked relief obtained, in some cases, short of ptyalism.

"In the second stage of the disease," he tells us, "our principal reliance must be on blisters; but we may apply leeches again and again on any new excitement of the heart." We do not acknowledge that these two remedies meet the same therapeutical indications, as is implied in the time and interchange, as it were, of their use. At a more advanced period of the disease, he thinks well of the repeated application of tincture of iodine over the præcordial region. Digitalis he believes to be inefficacious in the first or febrile stage of the disease, and that it might be dangerous in the more advanced stages and when the heart has been weakened.

Stimulants, of which little is said by authors in the treatment of pericarditis, are highly thought of by Dr. Stokes, who advises that in every case of dangerous pericarditis, after the first violence of the disease has been subdued, we should be anxiously on the watch for the moment when the weakened heart requires to be supported and invigorated. He is convinced that cases are often lost for want of stimulation at the proper time.

So far, it has been our endeavor to exhibit to our readers the manner in which the author handles his subject; and, at the same time, to afford them such a connected view of one of the most frequent and important of the diseases of which he treats as to help them in a future exigency, both by the information directly furnished and by incidental suggestions. It would be impossible for us, in ordinary review limits, to continue this method of analyzing the work throughout; and therefore, in completion of our task, we shall content ourselves with a rapid notice of its other divisions, not omitting to refer to some of the more prominent points of clinical interest.

We may sum up what Dr. Stokes writes on *Endocarditis* in the following practical conclusions :—

"1. That endocarditis is a disease more frequently met with in combination with pericarditis than as an isolated affection.

"2. That it may arise simultaneously with pericarditis, constituting the true endo-pericarditis; it may follow, or sometimes precede, the inflammation of the pericardium.

"3. That the tendency to its production in rheumatic fever must be considered less decided than that of pericarditis.

"4. That its symptoms can scarcely be said to differ from those of pericarditis.

"5. That there is no pathognomonic sign of its existence.

"6. That its diagnosis depends on the recent production of a valvular murmur under circumstances indicative of cardiac irritation, or the existence of special morbid states of the system which predisposes to inflammation of the heart.

"7. That where the symptoms of pericarditis are developed, but with attrition sounds, or evidences of pericardial effusion, we may make the diagnosis of endocarditis, especially if there be the recent development of valvular murmur.

"8. That the development of valvular murmur is not necessarily a consequence of this disease—at least in its more acute stages.

"9. That the causes which in some rare cases of pericarditis prevent the production of attrition sounds may be supposed also to act on endocarditis. If the products of the inflammation be of a homogeneous nature, if they be purulent or merely sanguineous, and if, moreover, they form no depositions on the valves, an endocarditis may exist without the production of any valvular murmur.

"10. That the causes which tend to prevent valvular murmur, even in extreme and chronic diseases of the valves, may also act in cases of extreme endocarditis in producing the same result. Of these two, the most likely to occur are the weakness of the heart itself, and the over-distension of its cavities with blood.

"11. That endocarditis in consequence of its effects in exciting the muscular contractions of the heart may actually develop a murmur, part of which at least proceeds from former and latent chronic disease.

"12. That although many cases of valvular disease evidently spring from an endocarditis, yet that we are by no means justified in attributing all valvular lesions to this cause, nor are we right in considering and treating such cases, even when they become chronic, as examples of chronic inflammation. It is true that the first morbid changes may have been inflammatory; but this state ceases, and is succeeded by new pathological conditions of deposition and transformation of tissue.

"13. That we cannot distinguish between endocarditis affecting the right side of the heart and that of the left cavities.

"14. That in cases of endocarditis passing into chronic and progressive disease of the valves, we are not able by physical signs to indicate the period when the inflammatory process changes into one of mere transformation and deposition."

We must be allowed to express our regret that Dr. Stokes did not think proper to follow this pathological summary of endocarditis with some remarks on the treatment of the disease. The pathological relation and affinity of pericarditis to endocarditis would seem to necessitate some notice of the treatment of the latter, if only as a sequence to that of the former; and to show that the indications for cure in both diseases are nearly the same, and based on the same principles.

In reference to the causes, or etiology, of endocarditis, the only notice on this point by Dr. Stokes is that contained in conclusion 3, in which the connection of this disease with rheumatism is indicated; but it is declared to be less than that of pericarditis with rheumatism. Not so thinks Dr. Latham, who asserts that of 136 cases of acute rheumatism the heart was affected in 90; and of these the endocardium, or the inner membrane, alone was the seat of disease in 63 cases, viz: 30 males, and 33 females. In the 90 cases, there were 7 of pericarditis, and 11 of endo-pericarditis. Bright's disease, to which no allusion is made by Dr. Stokes, is represented by Dr. Taylor to contribute to the production of endocarditis five times as often as all other causes put together.

Inflammation of the muscular or proper tissue of the heart, *Myocarditis*, occupies small space in the present volume; and for the sufficient reason that there is little to be said on the subject. As paralysis of the muscular fibre of the organ precedes its disorganization, death, which results from the first of these two conditions, takes place before there is structural change. Of simple myocarditis, independently of inflammation of the pericardium which invests, and of the endocardium which lines the great hollow muscle of the heart, "it may be safely said that we know nothing." We must, therefore, be content to study it in connection with pericarditis and endocarditis. Testa, we are told, points out, in the older authors, examples of the most violent form of inflammation ending in ulceration and gangrene. In one case, the outlines of which are detailed, the pericardium contained not less than two pounds of blood, and the heart, which was of a natural size, was flabby, and covered by a thick layer of fat. The anterior or right ventricle was covered with deep ulcerations.

"The semilunar valves were for the most part destroyed by a vast ulceration, extending nearly to the arch of the aorta; and beyond this point to the bifurcation of the vessel in the abdomen; the lining membrane was of a brightish red color; a large rent of the artery had taken place at the orifice."

This was a case of chronic ulcerative endocarditis and aortitis.

"We may, in the present state of our knowledge, arrange the results of myocarditis as follows:—

"1. An injected state of the cellular structure, followed by serous or sero-sanguinolent infiltration and diminished consistence of the muscular fibre. (Hope.)

"2. Lardaceous transformation of the effusion, giving a homogeneous appearance to the structure; the muscular fibres, however, retaining their texture and form. (Hope; Gluge.)

"3. Interstitial suppuration, analogous to that in the advanced stage of pneumonia.

"4. Abscess in the muscular structure of the heart.

"5. Superficial ulcerations, presenting a cribriform appearance."

Diseases of the muscular structure of the heart, depending on modifications in nutrition, such as hypertrophy, dilatation, and thinning, constitute the subject of a separate chapter (III.).

"Cardiac Polypi."—Dr. Stokes does not believe that this form of disease is of such frequent occurrence as we should infer from Rokitansky and especially Bouillaud.

"Purulent Cysts of the Heart," as one of the results of carditis, are next treated of; and cases are introduced illustrating this form of disease.

The "Diseases of the Valves of the Heart," are investigated in considerable detail and with much ability by Dr. Stokes; and we think we are not mistaken in pronouncing this the most valuable, as it is the largest part of his work. We cannot, by any sketch of ours, do justice to the author, or prove the accuracy of our judgment; but still we must endeavor to give our readers some idea of the contents of this chapter. When we say that, after all, we have little or no control in the way of direct medication over these diseases, which consist of a patentcy or morbid growth of the valves, we may be asked, why discuss the subject at all, and why praise the author for saying so much about it? Were the problem a simple one, consisting exclusively in a study of the lesions of the valves themselves, we should have no satisfactory reply to make to this question; but when we learn that, so far from its being a simple it is quite a complicated one, the solution of which involves close attention to and knowledge of the preceding, contemporary, and subsequent condition of the membranes, and still more of the muscular structure of the heart, we are disposed to turn a ready ear to him who proposes to separate the several elements of the problem, if not to solve entirely the mystery which it involves. The aim and scope of Dr. Stokes's inquiries and observations are distinctly set forth in these words:—

"The two great practical points to be attended to are, first, whether the murmurs really proceed from an organic cause, and next, what is the vital and physical condition of the muscular portions of the heart, for it is upon these points that prognosis and treatment must entirely depend. There is, indeed, no other organ whose affections more fully illustrate the truth of this principle, that, in dealing with the diseases of adjacent structures, diagnosis is easy where it is important, and of little value when it is difficult or impossible."

Immediately afterwards he tells us, that, in chronic diseases of the heart, isolation is the exception and complication the rule. With this axiom fixed in our minds, the study of valvular disease assumes fresh interest and a hundred fold more value in its application to treatment—not of the valves—but of the membranes through whose lesions the valves become diseased, and, also, of the muscles, which are called upon to struggle, and to exert additional power in order to supply valvular deficiency, or to overcome valvular obstruction.

Dr. Stokes admits two classes of valvular disease—one depending on inflammation, the other coming on without it. Of the diagnostic value of the sounds elicited by the valves in their altered condition, and of the difficulty of reaching satisfactory conclusions on this point, we have already spoken, in the preceding part of this article, while following the views and often adopting the words of the author himself. We advance, therefore, nothing new at this moment, when we say, on the same authority as before, that the number of cases in which we are able to establish a positive diagnosis in valvular disease is very small; and, on the other hand, that the number of pathological conditions which may so modify the valves as to produce abnormal sounds is very great. The irregularity in the functions of the heart depends more on the state of its cavities than of its valves. The diseases of the valves may be accompanied or followed by three vital modifications of the heart: 1. Augmentation of the force of the organs. 2. Diminution of force with increased irregularity in its contractions. 3. Diminished force, with remarkable slowness and relative regularity. The law which should enable us to determine the changes that take place in the cavities, as connected with valvular obstruction is yet to be discovered. Considering the infrequency of organic changes in the valves of the right side of the heart, and the impossibility of establishing a special diagnosis of them, Dr. Stokes, faithful to his predilections for practice over speculation, restricts his inquiries almost entirely to the mitral and aortic valves.

Three forms and seats of valvular disease may be determined with sufficient accuracy, namely :—

"1. Disease of the mitral valve. 2. Disease of the aortic valve with permanent patency. 3. Diseases of the aortic orifice without permanent patency. But when it is asked: Can we say whether the disease of the mitral valve is a narrowing or a dilatation, an ossification or a merely cartilaginous thickening? We must answer in the negative. If the question is raised: Can we always determine whether the valvular disease affects the pulmonary or systemic portions of the heart? the answer ought to be, that we have little but probability to guide us; for, in any given case of valvular disease, the chances that it exists, or at all events predominates in the left side are very great. To distinguish by reference to the points of greatest intensity of murmur, between the diseases of the valves on the right and left sides of the heart, cannot be safely done." P. 160.

We must not be in haste to pronounce every excited and irregular action of the heart as dependent upon lesion of the valves.

"Gouty palpitation, hysterical or nervous affections, cardiac attacks depending on sympathy with the stomach or liver, and, lastly, the dilated and weakened condition of the heart, attended with pulmonary and hepatic congestion, as in the case of Mr. Colles, present the most striking examples, not only of irregularity but of excited action; and these cases may occur independent of any valvular disease, or if such exist, it is inconstant in its seat, nature and amount, and incompetent to explain the condition in question."

Cases are related (pp. 178–9) of great excitement and irregular action of the heart; one a loud bellows murmur, approaching to a rasping sound, in which immediate relief was obtained by an emetic. One of these had been treated with extreme but erroneous activity by repeated venesection, the free use of mercury, and other antiphlogistic means, without any benefit.

From what has been said, we are quite prepared to coincide with the author in the following conclusions: That we must not depend on any acoustic character of murmur, nor even on its exact seat, for the diagnosis of valvular disease. It is requisite to combine with these considerations those of the history and symptoms of the case, as well as those which have reference to the state of the pulse, the force of the heart, and the condition of the lungs and liver. That all diagnoses depending solely on the tone, character, and seat of murmur, are more or less doubtful. That, although by acoustic signs we may often determine the insufficiency of a valve, there are no means by which, from the stethoscope alone, we can declare the cause of this insufficiency. That the diagnoses between the contraction and dilatation of any of the orifices, founded on acoustic phenomena, are to be rejected. That organic and anemic murmurs may coexist. That pseudo-apoplectic symptoms, such as occur in fatty degeneration of the heart, may also be observed in cases of permanently patent and dilated mitral orifice. From the same cause, and also its opposite, or contraction of the mitral opening, may proceed cardiac asthma. Venous pulsation in the jugular is also connected with contraction of the mitral orifice, which becomes a remote cause of disease in the right cavities of the heart. Jaundice is not uncommon in this variety of valvular disease. Permanent patency of the aortic valves, originating in endocarditis, is more often met with in young than in middle-aged persons. In many cases, this disease seems to be secondary to a weakened state of the system at large. The local inflammations which arise have generally an asthenic character.. Obstructed aortic valves produce hypertrophy of the left ventricle, and are marked by undue pulsations of the arteries of the head and neck. In practice, we may divide cases of this disease into two classes; the distinction being founded upon the state of activity or feebleness of the left ventricle. The disease may be mistaken for aneurism, not only of the thoracic, but of the abdominal aorta. Disease of the aortic valves, with or without inadequacy, may coexist, as in the case of mitral obstruction, with fatty degeneration of the left ventricle; under which circumstances we observe a permanently slow pulse, with a murmur on the one hand single and direct, and, on the other, double, in consequence of regurgitation.

An appendix to this chapter contains a long extract from the work of Skoda on auscultation and percussion, in which this writer gives an explanation of the sounds of the heart and aorta, coincident, in the main, with the views of Dr. Stokes.

In the chapter on the "Diseases of the Muscular Structures of the Heart," Dr. Stokes examines, in succession, Dilatation in general; then simple dilatation with hypertrophy of the heart, with or without hypertrophy of the auricles. The author, according to his custom, recapitulates, in the form of conclusions, the main points discussed or described in the course of the chapter preceding. We repeat some of these. Dilatation of the whole heart, or of any corresponding part of its cavities, or of any single cavity, considered as a purely local disease, is one of extreme rarity. Complicated dilatation, which is by far the most common, is of three kinds. In one, the complication is related to diseases of the orifices; in the second form, to obstruction in organs remote from the heart; and in the third, it appears to arise from a debilitated state of the cardiac muscles themselves. The dilatation of the heart, in its most common form, is met with as one of a triple group of local diseases, in which the heart, lungs, and liver appear to be affected. In many of these cases, the local affections are themselves secondary to certain morbid states, of which the most common are a gouty diathesis in an enfeebled subject, the anemic or scorbutic state, or some other form of cachexia. In this connection, both the structure and function of the lung are commonly deranged; and we meet with chronic bronchitis, dilated tubes and air-cells, and various degrees of pulmonary congestion. In other cases, again, the liver is the seat of deranged structure and function. It is generally enlarged, and yet its volume is observed to increase with each exacerbation of the disease. We have ourselves seen extreme enlargement of the liver accompanying great and fatal dilatation of the heart. The paroxysmal swelling of the liver may rapidly subside, leaving this organ in its former state of enlargement at the close of each exacerbation of the disease. In this triple combination the patient is liable to paroxysms of cardiac asthma, in which the three organs show symptoms of extreme derangement; that of the heart by increased irregularity, rapidity, and force of action; that of the lung by lividity, dyspnœa, and augmented râle; and that of the liver, by a rapid increase of its bulk, even though the permanent condition of the organ is one of hypertrophy. Derangement of function in any of these organs may induce a paroxysm of disease, and it is often impossible to determine whether disturbance of the heart, lung, or liver has been the exciting cause of the attack. Dilatation and increase of the thickness of the left ventricle may be met with, although no valvular disease exists; but it is most commonly seen in cases of valvular lesion. Hypertrophy, with dilatation of the left ventricle, may arise, on the one hand, from the regurgitant disease of the aortic orifice; and, on the other, from the permanently dilated condition of the mitral opening.

"Increased Enlargement of the Thyroid Gland, and of the Eyeball," owing to increased action of the heart and of the arteries of the neck, is made the subject of a semi-chapter, by Dr. Stokes. This affection is most commonly met with in women; but males are not exempt from it, and it may arise at various ages. Reference is made to a case, the subject of which was a lady sixty years of age. Its production is in no way connected with any of the influences of soil or climate. Amenorrhœa, with or without hysteria, is a common cause. In young women, mental anxiety and terror may produce it. The disease may be ameliorated if not cured. The subsidence of disease must begin with the heart, a neurosis of which, and of the cervical vessels, may be considered as the pathological state.

"Weakness, or Deficient Muscular Power of the Heart," is the title of another chapter in the work before us. Its most ordinary causes are as follows:—

> "Weakness of the heart in connection with muscular atrophy or emaciation, occurring in the combination of cardiac dilatation with hepatic and pulmonary disease; as a result in cases of pericarditis or endo-pericarditis; in connection with fatty degeneration of the organ; in fever, independent of softening of the heart; and lastly, in connection with the softening of the organ, as a result of essential fevers, and especially typhus."

The principal causes of a weakened condition of the heart are reducible to two great heads; namely, weakness from diminished innervation, independent of organic disease; and again, that debility, which is consequent on, or associated with organic change of some kind. We shall not repeat the varieties specified by the author; but follow him into the next chapter in which he examines those cases of weakness of the heart which proceed from the fatty degeneration of the organ.

"Fatty Degeneration of the Heart" admits of two varieties, as laid down by Laennec and adopted by Dr. Stokes, in common with other subsequent observers. In some, the fat is deposited more or less abundantly in the subserous cellular tissue, so as to produce a layer enveloping the heart. The muscular structure is, in a manner, pushed before it, and is commonly found pale, softened, and wasted. The color of the fat itself is generally yellow, and, in extreme cases, on the sternum being raised, the heart appears as if it were jaundiced. In the second variety, the adipose degeneration is supposed to commence in the muscular tissue itself, and to be a true transformation. Dr. Stokes believes that the first of these varieties may give rise to the second. This disease may, on the one hand, affect a heart already in a state of hypertrophy, or, on the other, of atrophy. In reference to the condition of the valves, we may divide the cases into three classes; namely, those in which there is a disease of the aortic orifice; those where the mitral opening has been narrowed; and, lastly, those in which there is an organic change in the valves. The obstruction of the coronary arteries is often met with in this disease; and, in certain cases, it may assist in the production of atrophy and the fatty state of the heart. There is, however, no necessary connection between this arterial obstruction and the disease. The pulse presents various characters: it may be natural in strength and frequency; it may be large, soft, regular, and slightly collapsing. It may be irregular and unequal, and intermitting; or permanently slow, and even altogether disappear for a length of time before death.

A remarkable peculiarity of the fatty degeneration of the heart is the occurrence of cerebral symptoms which simulate apoplexy—but which are seldom followed by paralysis. Attacks of vertigo, dimness of vision, and syncope are observed. There is also this farther and momentous difference between this pseudo and real apoplexy, that the frequency and force of the attacks in the former seem to be increased by whatever exhausts or lowers the patient, and to be diminished by the use of tonics and stimulants. In some cases the fit has been prevented by holding the head very low.

Sudden death, without rupture of the heart or lesion of the brain, is liable to occur in this disease. A remarkable sensation of sinking of the heart is frequently experienced. The respiratory symptoms are divisible into three classes: 1. Attacks of dyspnœa after bodily effort, similar to those observed in other cardiac diseases. 2. Gradually increasing difficulty of breathing, amounting to orthopnœa, and coming on spontaneously. 3. A form of respiratory distress, peculiar to this disease, consisting of a period of cessation of breathing, followed by feeble and short inspirations, which gradually increase in strength and depth until the respiratory act is carried to the highest pitch of which it seems capable, when the respirations, pursuing a descending scale, regularly diminish until the beginning of another apnœal period. During the height of the paroxysm the vesicular murmur becomes intensely puerile.

The coexistence of a slow pulse and feeble impulse, with a diminished first sound over the left ventricle, attended with a single murmur, while the second sound remains clear, implying alteration of the aortic valves, will be sufficient, in many cases, for the diagnosis of the disease. But, in those where no such murmur exists, we may also reach the diagnosis when we observe—in connection with a slow and regular, or a rapid but irregular and unequal pulse—the occurrence of the pseudo-apoplectic symptoms, with or without the special character of apnœal intervals and of the ascending and descending respirations. These observations of Dr. Stokes show a decided advance in the diagnosis of fatty degeneration of the heart on that made even by writers so recent as Drs. Hope and Walshe.

The "Treatment of the Organic Diseases of the Heart" is stated and discussed by Dr. Stokes in a separate chapter, in which they are presented as a group with affinities in common, and, at all events, complicated. The objection to the common method of discussing the treatment of each disease separately, is, that it assumes it to be presented in an isolated form; and we overlook also the great fact that, in many cases, changes not only in the mechanical but also in the vital state of the organ are continually going on; and that even when an organic disease is established, the state of the blood has a great influence on the physical signs, and also on the results of treatment.

In the "Treatment of Hypertrophy of the Heart," Dr. Stokes directs attention to the fact that, in passive enlargement of the organ, or in cases of hypertrophy with permanently patent aortic valves, we most frequently observe the necessity of stimulation. The more stress is to be laid on this view when we learn that "hypertrophy of the heart, occurring independently of disease in the valves or the aorta, is the exceptional case;" and hence the palliative treatment is, in very many cases, the most that we can attempt to carry out.

The indication of treatment, in the more active forms of the disease, is to moderate the force and general excitement of the heart's action. "But the use of the lancet should rarely be adopted, and the practice of repeated venesection in this disease cannot be too strongly reprehended." The same objections do not apply to local bleeding by means of leeches, applied in small numbers from time to time; but even this must not be pushed too far. Dr. Stokes does not think much of issues and setons. After the leeching, from six to twelve drops of the tincture of digitalis are to be taken three times in the twenty-four hours. This treatment is to be continued for some weeks, provided that the depressing effects of the remedies do not exceed the limits of safety. Sometimes the medicinal hydrocyanic acid, in doses of from one to two drops, may be substituted for the digitalis, if the latter produce nausea or loss of appetite. Anodyne plasters, or extract of belladonna, may be applied over the region of the heart. Among the palliative remedies, narcotics take the first rank.

The "Weak and Dilated Heart, with Enlargement of the Liver and Pulmonary Disease," is best treated, Dr. Stokes assures us, by the use of mercury, which is well borne by the patient, and wonderfully benefits, in such cases, the general health, in addition to the relief or removal of the diseases for which it was more immediately administered. We are left to infer that the medicine is to be given to the extent of causing ptyalism, although neither doses nor times of its repetition are mentioned. Diuretics are to follow on the mercurial action. Of these, are used various combinations of the vegetable and saline class, and even digitalis, in common with diuretics of the tonic and stimulating kind. During this treatment, wine or some other diffusible stimulant should be carefully administered, and the system supported by proper food. The individuals affected with the complications now noticed are generally advanced in life, and had been originally of a healthy constitution and a strong habit of body. They are liable to some degree of gout, which is usually of a masked character: they are also subject to bronchitis, which, during the height of the symptoms of dilatation, increases so as to resemble suffocative catarrh. The liver is permanently enlarged, but, in many cases, without the appearance of jaundice.

The "Treatment of Fatty Degeneration of the Heart" will be conducted by carrying out all the rules of hygiene, in regard to food, air, exercise, and hours of sleep; and an abandonment of all luxurious habits. We can do little in this disease by mere medicine; but great attention should be paid to a free state of the bowels, and, from time to time, the patient may use a mercurial, followed by a warm and tonic cathartic. In young patients, who approach to the anemic state, the preparations of iron, cautiously exhibited, will be found useful.

But, in confirmed cases of persons advanced in life, where the patients have always been temperate, and, above all, where the pulse is slow, with a tendency to faintness, or to attacks of pseudo-apoplexy, "our great reliance must be on the free use of wine or brandy; for by such a proceeding alone can we hope to preserve or prolong the patient's life." Long fasting and all fatigue of body or mental annoyance must be avoided. Persons with this disease should be much in the open air; and, above all, the mind should be diverted from dwelling or thinking even of the state of the heart.

Dr. Stokes has never seen a case of sudden death from metastasis of gout to the heart, and he believes this transfer to be much less frequent than is supposed. He has known many so designated, in which "the nature of the attack was manifestly the sudden failure of the powers of the heart at the termination of a long fit of gout, in which the patient had been debarred the use of wine."

With the views of Dr. Stokes on the "Condition of the Heart in Typhus Fever," published in 1838, the profession must be now generally acquainted. The main, but by others controverted propositions are, that the muscular structure of the heart, or rather of the left side, and especially the left ventricle, is soft and infiltrated, and sometimes its proper tissue destroyed; and that the weakness thus produced, and detected by auscultation, furnishes a distinct and positive indication for the use of stimulants. The subject is argued, *in extenso*, in the seventh chapter of the present work; and in a manner and with the adduction of cases which make it a good treatise, of itself, on typhus fever. As such, it alone should commend the entire volume to general perusal. We cannot forbear, at the moment, from adverting to the opinion entertained by Dr. Stokes, as coinciding with one which we have advocated for years in another place, viz: that typhus and typhoid fevers are "but varieties, and that they are results of the same poison or exciting cause, acting on individuals in different states." He has frequently observed that, in cases where a large number of a single family have been successively attacked by contagious fever, every form of the disease, from the most malignant typhus to the mildest typhoid fever, may be exhibited by different members of the family. In cases of the best-marked maculated typhus he has found occasionally follicular ulcerations of the intestine, and this at a time when no epidemic disposition to the disease could be supposed to exist.

We pass over the two chapters on "Displacement" and on "Rupture of the Heart," to reach that on its "Deranged Action." Under this not very definite head, the author includes a number of anomalous affections, in which the cardiac symptoms predominate; but without there being, in some of them, any organic disease of the heart, or, in fact, more functional disturbance of the organ than to constitute symptoms of disorder of the nervous system, as in angina pectoris, hysteria, and nervous palpitations; or of other organs, as in rheumatic and gouty palpitations; or of the blood, as in anemia. According to the author's belief, the special group of symptoms described as angina pectoris by Heberden, Parry, Percival, and Latham, is but the occurrence, in a defined manner, of some of the symptoms, connected with a weakened heart. Nothing new in the treatment is offered. "Simple Neuralgia of the Heart" is spoken of, and its treatment given. Neither has any claim to novelty. A piece of advice, both to and from the physician, ought always to be acted on, as being one of the most certain remedies: it "consists in removing from the patient's mind the apprehension that his heart is organically diseased."

Under the head of "Nervous Palpitation," the author discusses the question of the obstacles in the way of forming a diagnosis between functional and organic disturbances of the heart, which he believes not to be so great as modern writers lead us to suppose. He admits, however, that there is no acoustic character by which murmurs not depending on organic diseases of the heart can be safely distinguished from those of an opposite description. Valuable remarks follow on the different murmurs, and the means of ascertaining their respective character and diagnostic value, which we cannot now pretend either to reproduce or to analyze. Examples of deranged action of the heart are furnished in the increased excitement in young and growing persons, and in the palpitations from derangement of the stomach, and from the excessive use of tea; and in hysteric, and in gouty and rheumatic palpitations. Under the same head is ranked "cardiac suffering from the abuse of tobacco." Interesting cases are related from Percival, and some coming under the author's notice, showing the excessive, distressing, and alarming effects on the heart by frequent potations of strong green tea. It is very vexatious to hear persons complain of palpitations and other nervous disorders, while they persist in drinking strong tea, even though it be black, for it is now pretty well understood that the difference between the black and green teas consists in the mode of preparation. The means of immediate relief from the theine disease—we might call it poisoning—was found in opium and brandy, which, under the circumstances, are tolerated in considerable quantity. Rheumatic and gouty palpitations are to be watched and treated as irregular forms of rheumatism and gout.

As an aid to the diagnosis of the functional and organic diseases of the organ, attention is directed, by Dr. Stokes, to the "Influence of Position of the Body on the Rate and Action of the Heart." He repeats the opinion of Dr. Graves, which is controverted by Dr. Knox, that the pulse is less affected by posture in hypertrophy of the heart than in cases where this organ is free from disease. The author repeats the observations of Dr. Graves, on the difference in the pulse between an erect and a recumbent posture, in a way to leave an impression on the mind of the reader, that Dr. G. was the first to make the discovery of this curious and instructive physiological fact; whereas Dr. Knox, fifteen years before (in 1815), had exhibited these results in a paper in the *Edinburgh Med. and Surg. Journ.* Of still anterior date, by a century, were the observations and experiments which clearly showed the fact of a differential pulse, by Dr. Bryan Robinson, a countryman of Drs. Graves and Stokes. An extended series of experiments bearing on the same point were made by Dr. Guy, and published in the *Guy's Hospital Reports*, and in the *Medical Gazette* for 1838.

The last two chapters (XI. and XII.) of the present volume, are on "Aneurism of the Thoracic and of the Abdominal Aorta," subjects of undoubted interest, but which it would be useless for us to attempt to notice in a suitably appreciable manner, at the close of an article already extended, we fear, beyond our proposed limits. We must, for this reason, forego, also, some remarks which we had intended to make on cardiac pathology in connection with symptomatology deduced from the secondary affections in diseases of the heart. To this branch of the subject Dr. Stokes has hardly given his attention. Dropsy, for example, so common an effect of cardiac disease, especially of dilatation, and of valvular obstruction, is only mentioned casually; it does not find a place in any of its forms in the index; nor is it specified in the caption of any of the eighty cases of the varieties of heart disease, abstracts of which are given in his work. In the account of some of them, dropsical effusion is mentioned incidentally, as in the case of Mr. Colles, the eminent surgeon, in which, "on various occasions, the symptoms had gone so far as to cause complete orthopnœa, with unusual anasarca, and alarming pulmonary congestion." We are repeatedly told, in the work, of diminished and almost suppressed renal secretion, but without mention of the almost necessary consequence, dropsical effusions, either in the areolar tissue, or in some of the serous cavities. Hepatic displacement, enlargement, and disordered function are spoken of, but still they might well have formed the subject of a semi-chapter, or, at any rate, the text of a distinct description. So, also, in the instances of pulmonary congestion, and of dyspnœa, orthopnœa, and asthma. We are aware that these are but symptoms; still they are so urgent and so distressing as to require often immediate relief, without our being able to wait for the means (even supposing we had them at hand, and could count on their effects) of acting on the particular derangement or disease of the heart itself. Among the symptoms which merit notice as valuable, even if not diagnostic, is the facial expression or physiognomy of the individual suffering under cardiac disease. A knowledge of all the secondary affections and disorders produced by organic diseases of the heart will often enable us to trace causes from effects. In this way, what may be called a violent suspicion of central and internal mischief will be entertained from what we see to be going on at the surface and the exterior, or on parts which more immediately and clearly tell their distress; and we shall then be prepared to make minute investigations into the condition of the heart sooner than we might have done by the promptings of this organ alone. That Dr. Stokes is familiar with the occurrence of all the secondary symptoms, on which, in a general sense, he lays much stress, it would be sheer impertinence to doubt for a moment. It is most probable, indeed, that his silence, or mere allusion to some of them, is caused by this very familiarity. We must receive this as an explanation of his omitting to notice the frequent occurrence of apoplexy in connection with dilatation and thickening of the left ventricle in some cases, and of valvular obstruction in others.

It must, by this time, be very evident to our readers that the work of Dr. Stokes, as he himself assures us in his preface, does not pretend to be either a system of physical diagnosis of diseases of the heart, and of connected therapeutical treatment of those diseases, or even a methodical treatise, like that of Bouillaud and Hope on the subject. Hence it is more adapted to the wants of the practitioner than of the young student. The former will soon overlook its defects of method, frequent repetitions, and lack of connected etiological description, and of precision in therapeutical matters, in consideration of its signal merits as exhibiting the union of pathological with clinical medicine, and for the aids which it gives him in the many intricacies that must, without such assistance and guidance, sorely puzzle and perplex him. There are no less than two hundred and twenty-two cases, in more or less detail, introduced into the body of the work, descriptive of and elucidating the several diseases of the heart and aorta. Regarded merely as a volume of cases and wise commentaries on them by so able, experienced, and faithful a teacher as Dr. Stokes, we cannot attach too high a value to this work, which is alike honorable to him and to the profession of which he has been so long a distinguished member.

In conclusion, we may be allowed to ask why it is that, with the abundant talent and respectable attainments of the hospital corps in the United States, we could not have at least one "Meath Hospital," for the methodical and patient teaching of pathology and clinical medicine? The materials with us are as ample and diversified as were those out of which Andral, and Louis, and Bouillaud, and Hope, and Stokes have framed their great works. J. B.

Art. II.—*A Manual of the Practice of Medicine.* By George Hilaro Barlow, M. A. and M. D., Cantab., etc. etc. With Additions by D. Francis Condie, M. D. Philadelphia: Blanchard & Lea, 1856.

There is a series of works in use among our professional brethren in England, known as Manuals, which are admirably adapted for the use both of practitioners and students. Written by men of the highest reputation in the different branches of which they treat, they are condensed, yet complete and practical treatises on the various subjects appertaining to the science of medicine. Their merit has been acknowledged by the almost universal patronage accorded to them by the profession, not only at home, but in this country; for Fergusson's *Practical Surgery*, Wilson's *Anatomy*, Fowne's *Chemistry*, and Taylor's *Toxicology*, have long since occupied a deservedly high rank among our textbooks. The work of Dr. Barlow completes the series, by filling the vacancy which has heretofore existed in it upon the subject of practice. From the position occupied by the author among the practitioners of the British metropolis, his connection with various charities, but more especially from the vast experience necessarily gained during the many years he has filled the office of physician to Guy's Hospital, we have been led to expect from him a work upon the practice of medicine fully equal to any of the series already issued. In this expectation we have not been disappointed, and shall attempt to lay before our readers such an analysis of the work, with some extracts from it, as to enable them to say whether our judgment is correct or not.

But we must first premise that the work is brief; it is what it purports to be—a manual. Those, therefore, who may look into it for an elucidation of the many disputed points in this branch of science, however interesting or important they may be, will not find them; there is not space in a work upon this subject, of about six hundred pages, for critical analyses of lengthy arguments for and against the many theories which at present engage the attention of the profession. On the other hand, in plain description of disease, interpretation and relative value of symptoms, in laying down the indications for treatment, and in practical directions for carrying them out, it will not be found lacking.

The first seven chapters of the work are occupied with the different subjects of general pathology and therapeutics. Of these, none surpass in interest, either to the student or practitioner, the doctrines and treatment of inflammation. The chapters upon this subject merit a brief notice, because the author has presented the teachings of the latest pathologists, and based his treatment more upon them than we have heretofore seen done. Inflammation has too long been looked upon as increased action in the parts affected, and described as a process in which the bloodvessels of the part were chiefly concerned. This view of the subject sustained the practice of bloodletting and other lowering measures, a practice which, although generally abandoned by the profession, yet maintains its place in the text-books as the chief and most generally applicable means of combating this abnormal series of actions. But inflammation is no longer looked upon as so simple a departure from health; it is now considered a very complicated derangement of the process of nutrition, of which the changed condition of the irritability and contractility of the vessels of the part are only secondary changes, the primary cause lying yet without the bounds of our vision. This primary cause is, by some, considered to be a changed condition of the blood itself; others attribute it to an increased attraction between the tissues and the blood, believing it to be "the condition of the part which determines the supply of blood, rather than the supply of blood the condition of the part;" and others, again, especially the German pathologists, of whom Virchow stands at the head, see in the nerves alone the origin of the process. Virchow defines inflammation and inflammatory fever as "consisting essentially in elevation of temperature which must arise from increased consumption of tissue, and *appears to have its immediate cause in alterations of the nervous system.*" To support this view, many facts are brought forward; as, for instance, that first shown by Bernard, that section of the sympathetic nerves in the neck is followed by rapid increase of temperature in the corresponding half of the head;* and the increased action of the heart when these nerves are tied and divided, as pointed out by Wagner.† In disease are also the instances of inflammation of the eye following injuries of the fifth nerve, and inflammation of the testicle following that of the kidney. On the other hand, there are undoubted instances of the origin of the process from the blood being charged with poisonous or excrementitious matters, as of the inflammation of the skin in variola, and of the serous membranes in Bright's disease. But our author, like Mr. Paget, does not confine himself to any one origin for inflammation, but considers it as arising from derangement of any or all the conditions necessary for healthy nutrition laid down by the latter in his *Lectures on Surgical Pathology*, which are—"1. A regular and not far distant supply of blood; 2. A right state and composition of that blood; 3. A certain influence (at least in most cases) of the nervous force; and 4. A normal state of the part in which nutrition is to be effected." He also agrees with the writer in looking upon inflammation as the opposite of "increased action," as exercising, in fact, a depressing influence upon the vital powers of the part and system.

"Now, as regards the part itself which is the seat of the inflammation, it may be remarked, that the term increased action, so freely used by writers upon this subject, must be taken in a very qualified or restricted sense, for though there is, while the inflammation lasts, an increased afflux or determination of blood to the part, there is no increase of the vital process of nutrition; on the contrary, so far from there being any hypertrophy or increased formation of the natural tissues of the inflamed part, we have an opposite tendency; the tissues waste, or become soft, relaxed, and weakened; they degenerate, and are lowered in functional power, or become absorbed; they die, and are cast out from the system.

"We perceive, then, that, as regards the part itself, the effect of inflammation is rather to depress than to exalt its vitality; and the same may perhaps be said of the attendant fever, upon the system at large; whilst this fever lasts, the waste of the body often goes on with increased rapidity, and, its nutrition being checked, its renewal is arrested until the inflammation has subsided."

The nearer we approach to a knowledge of the primary departure from health, and the more clearly we distinguish the secondary conditions of disease from those that precede them, the more scientific and successful will be our practice. We have an instance of this in dropsy; the means for the removal of the fluid, the secondary condition, may be nearly similar, but our treatment of the condition which has caused the accumulation will vary according as it may have been valvular disease of the heart, scirrhosis of the liver, or granular degeneration of the kidney; and the treatment of this disease has improved in proportion as the various organic lesions causing it have been distinguished from each other. The views, then, which our author holds upon the subject of inflammation, exert a necessary influence upon the treatment of it. If it exerts a depressing influence upon the part and system, an additional depressing influence, such as bloodletting, cannot certainly be looked upon as a general means of cure; if the bloodvessels are not alone the origin of the disease, they cannot be the only parts of the system to be acted upon to restore the parts to health. Such is, practically, the line of argument adopted, if not stated, by our author, and we find in this work so many restrictions and limitations thrown about the use of this remedy, as to confine its application to the narrowest limits; the various conditions, external and internal, which contraindicate its use, are dwelt upon at length, and the injuries which may result from it plainly stated. This desire to limit the practice of robbing the body of its vital fluid is shown by the quotation he makes from Andral, when considering the treatment of simple congestion, who says that "neither by local nor general bleeding can we remove the *unknown cause* under the influence of which the hyperæmia was originally developed." Upon the treatment of the more complicated process of inflammation, after considering the effects of bloodletting, in its various modes of application, upon the force and frequency of the heart's contractions, the derivation of blood from the inflamed part, and the modification of the blood itself, he lays down the following proposition:—

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* See Medico-Chirurgical Review, xxx. p. 248, and xxxiv. p. 323.

† An article detailing Wagner's experiments will be found in the American Journal of the Medical Sciences, for April, 1855, p. 483.

> "That bleeding, when applied at the right time, and under fitting circumstances, has the power of subduing inflammations, equalling or even surpassing that of any other remedy, is a truth to be equalled in importance only by another, viz: That when ill-timed as regards the period of the inflammation, or performed in defiance of contrary indications, arising from the character of the inflammation, or the condition of the patient, bloodletting is as injurious as regards the progress of the former as it is dangerous to the life of the latter."

It is in pointing out this "right time," and these "fitting circumstances" that the application of this remedy is so restricted. After those cases are deducted to which it is not adapted on account of age, sex, place of residence, and mode of life, and those disqualified by the condition of the constitution, previous disease, and stage of the present one, or by a prevailing epidemic tendency, there are but few left to which it is applicable. The chief condition laid down for our guidance in its application is the state of the pulse, and so far as our experience goes, if we follow the author's directions, we shall still more rarely, in this country, find those conditions present which he considers indicate its application.

> "It is then by the force of the heart's action that we are mainly to be guided, such force being measured, not so much by the impulse which seems to be given to the blood in the artery, as by the power with which it resists the pressure of the fingers." [Bloodletting is most indicated when] "there is a frequent and strong contraction of the ventricles, united to a forcible contraction of the artery, which is the condition produced by active inflammation in a sound constitution, and which, as we have already explained, manifests itself by a frequent, hardly-compressible, and moderately full pulse, which is also rather sharper than in health, owing to the ventricular contractions taking place somewhat more suddenly."

We have dwelt upon these new views of the treatment of inflammation which are now coming into vogue, more particularly for the benefit of the younger members of the profession, for we can well remember the difficulty we experienced some years since, when commencing practice, in reconciling the teachings of the books with the practice of other physicians met in consultation, and with the favorable course and termination of many cases of inflammation not treated by venesection.

From these same views of the pathology of inflammation we also find that those conditions are carefully indicated which contra-indicate the use of mercury in its cure. There is no doubt that this remedy is too often recklessly administered, producing a bad effect upon the constitution of the patient, and often, also, upon the disease itself. The following extract shows our author's estimation of the power of this article for good or for evil:—

> "The effect of mercury is an inflammation of a particular or specific kind, the gums becoming swollen, or, as it is termed, spongy, under its influence, and after a time ulcerated. This inflammation is, in fact, of an aplastic character, tending to suppuration and ulceration, and consequently favoring the effusion of corpuscular rather than of fibrinous lymph, or when lymph is effused, promoting its degeneration rather than its organization. It must be apparent from this, and from what has been already said of the subsequent progress of inflammatory effusion, that the effect of mercury carried so far as to produce ptyalism, or an approach to it, must be bene-

ficial, or the contrary, according to the constitution of the patient, and the seat and character of the inflammation, since it may in some cases bring about that amount of degeneration which is most conducive to the re-absorption of the effused matter; but in others it may hurry this degeneration to an extent rendering the effusion incapable of re-absorption, and, therefore, fit only to be expelled from the system by suppuration and ulceration. And again—as we have seen that the effect of the inflammation upon the pre-existing tissues is to diminish their vitality, and favor those degenerations in them which we have spoken of as liable to occur in the new matter—it must follow that mercury, by favoring such changes, may cause the destruction of those tissues into which the inflammatory effusion has taken place."

The other means of combating inflammation, such as purgatives, diuretics, sedatives and counter-irritants, are fully considered. Upon the importance of removing all those circumstances which tend to keep up or excite the inflammatory action, we have some excellent remarks. The principle which is so universally acknowledged and acted upon in surgery, of giving rest to an inflamed organ, and the avoidance of any means likely to stimulate it, is too often forgotten when internal organs are concerned, although no less important.

"The mechanical excitement of speaking must be avoided when the larynx, air-passages, and lungs are inflamed; the stimulation of an acutely inflamed bronchial membrane, by those expectorants which excite it, when exhaled by the lungs, must be as carefully abstained from; and the steady maintenance of a uniform temperature is to be enjoined upon the same principle, because a want of heat, or variations of temperature by calling for a greater activity in the function of respiration quickens the circulation through the lungs. Nature shows the necessity of suspending the functions of the stomach when that organ is inflamed, by the immediate rejection of any articles of aliment that may be taken into it; but art is not always equally cautious to avoid the excitement of the peristaltic action of inflamed intestines. If calomel be, as is commonly supposed, a stimulant of the liver, it ought at least to be used with caution when that organ is inflamed; and the same principle ought to be applied to the use of diuretics, when the secretion of urine is suppressed by inflammation of the kidneys."

The other subjects connected with this division of the work are treated of concisely, but at sufficient length; there are chapters upon Typhous, Scrofulous and Tuberculous Deposits, Causes of Disease, Elementary Changes, Modes of Death and Signs of Disease. Those who have read Watson will not need the chapter upon the different modes of dying, nor are the causes of disease as fully presented as in Williams' *Principles of Medicine*. On the other hand, the chapter upon the signs of disease is a most excellent one. Nowhere, we believe, will as much sound practical information be found in the same number of pages—as much information really serviceable at the bedside.

The consideration of special diseases begins with rheumatism and gout. In the pathology of these affections Dr. Barlow adheres to the current humoral doctrines, believing it to be highly probable that most of the constitutional or idiopathic inflammations have their origin in the blood. The effects of treatment seem to substantiate this view of the case, yet there is much upon this point which yet remains to be cleared up—if, and it is by no means certain, the presence of either lithic or lactic acid in the blood is the cause of these diseases. The former has been found by Dr. Garrod in the blood of gouty patients, but it is often present in excess without being attended by gout; nor has it yet been discovered in the blood of those affected with rheumatism, although our author gives it as his opinion that it is the *materies morbi* in this disease. In the treatment of acute rheumatism he advises a simple venesection, in cases adapted to it, followed by opium in full doses, combined with small quantities of calomel and antimony, and alternated with evacuants. The following remarks upon the use of colchicum are worthy of remembrance:—

> "Colchicum has, no doubt, great power over rheumatic inflammation; but it may be doubted whether this is not merely dependent upon its power of elimination, though it is also an effective sedative to the circulation. It does not, however, generally arrest the rheumatism, unless it act fully upon the bowels or kidneys, producing either the loose pea-soup-like motions, commonly known as colchicum stools, or copious, rather dark urine, or both. If, however, it cut short the rheumatism by its simple sedative or antiphlogistic power, there is too much reason to apprehend its reappearance in the heart; and the belief has certainly gained ground that rheumatic carditis has increased in frequency with the use of colchicum in the treatment of rheumatism."

He, therefore, counsels its administration in combination with aperients. But he thinks there is an uncertainty about its action, and that "partly from the variation in strength of different specimens, and partly from its being a cumulative agent in the system, it is almost impossible certainly to prevent its sudden and uncontrollable action as a poison." In this connection it may be well to mention what Dr. Graves, in his *Clinical Lectures*, says of this remedy in the treatment of rheumatism: "Rely upon it, that where colchicum does not afford relief *in a short time* and *in moderate doses*, there is no use in giving it a further trial." The use of lemon-juice in the treatment of this disease, as first proposed by Dr. Owen Rees, upon chemical principles, is also noticed; its powerful sedative effects upon the circulation are mentioned as being as likely to effect a cure as its chemical effect upon lithic acid by converting it into urea.

> "It ought only to be used when the patient is robust, and the rheumatism of the well-marked, acute character, and it is remarkable that such are the only cases which commonly do well under its use. The powerfully depressing effect of this remedy, and its frequent failure, as well as the fact that cardiac inflammation does sometimes arise during its employment, are drawbacks to its eligibility for the cure of rheumatism."

A decided preference is given, however, for the elimination plan of treatment, which consists in the administration of those salts of the alkalies which, in the course of the circulation, are transformed into carbonates, and appear in the urine in that form; such are the tartrates, citrates, and acetates of soda and of potash. These salts all have a diuretic action, but the theory of their efficacy rests upon the well-known influence of a solution of the alkaline carbonates in promoting the solubility of albuminous compounds—such compounds being present in the circulation as well as lithic acid, and like it, being the result of the wear and tear of the tissues and of the ordinary process of nutrition. In the language of Golding Bird, in his work on *Urinary Deposits*, who was the first, we believe, to prove the value of this class of remedies, "they increase the metamorphosis of tissue by a direct chemical action on the elements of worn-out and exhausted tissues, or other matter in the capillary laboratory of the body." We have certainly seen more satisfactory results from a steady pursuance of this plan of treatment in rheumatism than from any other, premising, of course, such evacuating remedies as may be indicated in each case.

A chapter upon auscultation and percussion introduces the subject of diseases of the chest. In the nomenclature of this branch of the subject he differs very little from that found in Watson's *Practice* and Latham's *Clinical Lectures*. There is an evident desire to simplify the subject and make it applicable to every-day practice. Works upon the subject are so numerous, and recent writers have introduced so many new terms, that it requires no little patience, skill, and knowledge to compare two or more of them, or even to read them in connection. This is to be regretted, for while the practical utility of auscultation and percussion as a means of diagnosis cannot be too highly estimated, it is folly to so mystify these subjects as to make it impossible for any one to acquire the necessary practical skill in their application unless living within the walls of a hospital. We are glad, therefore, to find our author entering his protest against making the study of diseases of the chest "needlessly difficult, if not repulsive," by "encumbering it with semi-barbarous technicalities."

The chapter upon bronchitis, acute and chronic, is a good one; the different indications to be fulfilled in this varying disease are carefully pointed out, and upon the correct appreciation of these alone can a scientific course of treatment be applied, and success attained. The climate in which the author resides gives him abundant experience in this affection, and there are sections of our country where the same climatic influences are in operation, especially during certain parts of the year, to produce this disease. Along the borders of our western lakes, during the spring months, the weather is cold, damp, and variable; winter does not give up his sceptre until after a long combat. Here bronchial affections are especially prevalent, and to practitioners in such localities we think this chapter will be of essential service.

In the treatment of inflammation of the lungs, we think the author has devoted too much space to a consideration of that form of the disease which he acknowledges to be rare—*simple sthenic pneumonia.* He quotes Dr. Watson, who says that he rarely meets with more than five or six cases a year, and states this to be in accordance with his experience. If so, then why occupy so much space in detailing the application of bloodletting, antimony, &c., when the other forms of the disease are more frequent in their occurrence, and by no means so simple in their treatment? However, the treatment laid down after the stage of consolidation has been reached, when the time for the more active antiphlogistics has passed by, is full and judicious, while the remarks upon the typhoid form of the disease, so prevalent in our western country during the winter months, and known under the name of *winter fever*, make us regret that he had not given us a more extended notice of it. So far as our experience goes, we should say that inflammation of the lungs most frequently appears with us under the form here mentioned:—

> "The form in which pneumonia most commonly presents itself in large towns, is one which we should be inclined to regard as intermediate between the sthenic and the typhoid. It has not the hard pulse and white tongue of the sthenic, though it has not the signs of prostration which attend the typhoid. The auscultation signs are, however, those of active pneumonia. These cases might no doubt be made typhoid by the use of the lancet, but they generally do well with moderate doses of calomel, with antimony and opium, or even hydrarg. c. creta and Dover's powder, aided by a saline and antimonial draught; a blister being applied after the skin has become perspirable."

That this is correct of the city where the author lectures we know, for we watched with much interest, during one winter, the treatment of this disease by Dr. Todd, of King's College Hospital, whose patients are drawn from the same ranks of life with the author's. The treatment pursued by this gentleman consisted almost entirely of the liq. ammon. acet. in full doses, with turpentine stupes to the chest—wine and diet being given according to circumstances. The success following this treatment was highly satisfactory, but a favorable influence is of course exercised upon any disease by the vast difference in hygienic circumstances between the dwellings of the London poor and the wards of a well-regulated hospital.

Upon the subject of phthisis, the usual doctrines in regard to its pathology are given. Its different forms are then classed under three heads: 1. The tuberculous; 2. The tuberculo-pneumonic; 3. The pneumonic; a classification which is of value, as indicating a course of treatment adapted to each kind. The first is not preceded, attended, or followed by pneumonia, being purely tuberculous; it is rarely met with in practice. In the second, inflammation arises in the course of the development of tubercles, and is the chief agent in disorganizing the lung; while in the third, the vomicæ have their origin in pneumonia independent of tuberculous deposit. After giving the usual division of the disease into the three stages of deposition, softening, and excavation, our author makes the following remarks:—

> "It is, however, worth the inquiry, whether there be not another stage antecedent to the first of these, which might be termed the premonitory, since if such be found to exist, and if it can be recognized, or even conjectured by any appreciable signs, we may be enabled to apply our remedies at the time at which there is the greatest, or rather the only probability of their producing a satisfactory result.
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> "The stage of deposition, which is often regarded as the first, is that in which tubercles are first present in the lungs, and as they are generally considered essential to phthisis, it may perhaps appear illogical to speak of any previous stage of the disease; but setting aside the difficulty as rather formal than real, it must be obvious that since tubercle is itself a pathological epigenesis, or morbid product, there must have been some antecedent diseased action, preceding or even causing this product."

To be able to recognize this stage, then, is one of the most interesting and most important problems now before the profession; to discover the approach of the enemy before the lines have been drawn and the trenches dug for that slow but certain siege of the citadel of life, gives the only chance for his defeat. But the insidious approach of this disease is as well known as its fatality, and no certain symptom of well-marked character has yet been discovered which indicates its earliest stages, and the departure from health is generally too slight, in this stage, for the patient to call in medical advice. The physiological symptoms which appear antecedent to the deposition of tubercles are, according to our author, those which indicate obstructed pulmonary circulation, and which may arise from several causes, but which, "when observed about the time at which phthisis most commonly makes its appearance," especially when attended with hæmoptysis of any amount whatever, are sufficient to excite apprehension. The physical signs of this stage are stated to be those which arise from "the increased density of the lung rendering it a better conductor of sound than is the healthy organ, and which is the effect of the increased amount of blood" which immediately precedes the deposition of tubercle. There is then but little, if any, diminution of resonance on percussion, no flattening of the chest, while the expiratory murmur is too distinctly audible under the clavicles, and the sounds of the heart are too plainly heard at the apices of the lungs.

> "This state of the upper lobes of the lungs [increased density from congestion] often gives rise to another phenomenon which, though not constantly present, or at least not always observed, is amongst the earliest premonitory symptoms of phthisis; namely: a soft systolic murmur (*bruit de soufflet*) under the clavicles, generally heard about the situation of the bifurcation of the innominata on the right side, and of the subclavian on the left. It is not, however, so distinctly traceable over the course of the vessel as to be obviously produced by the current of blood through it, and it may be a question whether the murmur is really produced by the lung pressing upon the innominata or subclavian, or whether it be that the pulmonic circulation actually becomes audible owing to the increased vascularity and density of the lung, and thus a sound is produced analogous to the placental souffle."

Attention has been called to this murmur by Dr. Latham, whose works are among the very best in the hands of the profession, and, so far as we know, he is the only author who has alluded to it previous to the appearance of the present work. It is interesting to note the coincident observation of such a symptom by two independent observers, and we therefore quote his remarks in regard to it. After having described the same locality as Dr. B., as the place in which it is found, he says:*—

> "Of such a murmur, often audible in this situation exclusively, I am certain as a matter of fact, and certain too of its very remarkable accompaniments. I have witnessed it either in those who were undeniably

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* Lectures on Diseases of the Heart, Amer. ed., p. 45.

consumptive, or in those who were too justly suspected of being so. I cannot say in what proportion of the phthisical it occurs, but I am continually meeting with it.

"Yet my knowledge goes no further than the living symptom. I have gained no explanation of it by dissection ; I have only a clinical experience of the matter. * * * * Where, from my direct examination of the lungs, I cannot get beyond a suspicion of tubercular disease, the murmur in the space indicated must always contribute to confirm it."

Without occupying any further time in considering the treatment recommended in this disease, we may briefly say that the author does not seem to rely much upon cod-liver oil, or indeed upon any means, for the cure of the disease after it is fully established; perhaps not so much as we are justified in doing, for although we cannot yet determine the reasons why in some patients the oil does so much good, while in others it seems to fail entirely, the proportion of those who are benefited by its use is so great as always to justify its administration. The treatment relied upon is that adapted to this stage preceding deposition—in other words, it is prophylactic ; while those means adapted to the amelioration of symptoms during the more advanced stages, and those for the treatment of the various complications of the disease, are of great practical value, and show that intimate practical acquaintance with the subject, and that minute attention to the various circumstances of different cases, which are characteristic of our author. This part of the subject does not receive from practitioners generally that attention which it merits; to soothe the pains of the afflicted and to lengthen out the days of life, are among the humane missions of the profession, and better far to be content with this when all hope of a cure is fled, than to abandon our patients to the delusive promises and the heartless, unscientific drugging of quackery.

Among the many diseases of the alimentary canal and its appendages, we select one or two as worthy of notice from their intrinsic importance, and from the manner in which they are presented. Peritonitis, in its acute idiopathic form, is stated to be by no means so common a disease as it is generally considered to be; its origin is attributed, in the great majority of cases, to some other lesion of which this is the consequence, and the various causes giving rise to it are considered at some length. Perforation of some portion of the intestinal tube is one of the chief of those giving rise to the disease in its most acute and rapidly fatal form; irritation of the ovaries is also considered as causing the disease oftener than is generally recognized by medical writers, and some instances of this kind are given as having fallen under the author's observation; irritating purgatives, as the various patent pills, are stated to cause it by extension of the violent irritation and inflammation of the mucous coat of the intestines, produced by them, to the peritoneum, and the well-known influence of the puerperal state as a cause is also considered.

> "Peritonitis may also arise from blood disease, and this is one of its most frequent causes. Thus rheumatic or gouty inflammation of the peritoneum is a possible, though not a very probable occurrence. It may also arise from the presence of bile in the blood; but amongst all its causes, there is perhaps none more frequent than uræmia, or retention of the urea in the blood, owing to disease of the kidneys.
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> "It may also arise from the presence in the system of various morbid poisons, as of the exanthemata; and there can be little doubt that the scarlatinous poison may affect the peritoneum, independently of the kidney disease, which is one of its common effects; the same remark applies still more to erysipelas."

In this latter class is placed the puerperal form of the disease, and, in the following quotation, it will be seen that the author takes decided ground upon a point which is the subject of no little controversy, and that he adopts views directly opposed to those held by one of the most eminent obstetricians of our country.

> "It has just been stated that the disease is frequently epidemic, and, what is of more importance to be remembered, it is highly contagious; so much so, that it may be conveyed through the medium of a third person; and it is no uncommon thing for a medical man who has attended a patient so affected to communicate it to the next woman whom he may deliver."

We are sorry to differ upon a point of such importance with a man of so much learning and experience as Dr. Meigs, yet the amount of evidence presented is so great that we cannot escape the conviction that the above paragraph expresses the truth of this matter.*

The pain, tenderness, and pulse, are fully considered as signs of the disease, and the following remarks added upon a means of diagnosis not as much attended to as it deserves to be:—

> "The state of the urine is also important in all cases of peritonitis. When the inflammation is at its commencement, and of an active character, the urine is commonly scanty and high-colored. Dr. Abercrombie states, that when the peritoneal covering of the kidneys is involved, there is almost total suppression; though there is some doubt as to whether this may not arise from the suppression and peritonitis having a common cause,

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* A striking instance of the contagious character of this disease, and also a brief account of similar experience in the Vienna Lying-in Hospital, are given in a review of this work in the *Medico-Chirurgical Review*, and can be found in that journal for April, 1856, p. 291.

rather than from the suppression being the effect of the inflammation. The character of the urine is important also, as, should it be albuminous, it would indicate that the peritonitis is probably the effect of renal disease; and should it contain a large quantity of lithates, it would indicate the likelihood of acute inflammatory action, with probably some hepatic complication; and should it be in large quantities, and of light specific gravity, it should suggest the existence of some form of hysteria simulating peritonitis."

We have not time to devote much attention to the treatment of the disease; in the acute form great reliance is placed upon opium, while the use of purgatives is deprecated in the strongest terms; "there can be no more mischievous practice than the exhibition of such drugs in acute peritonitis." We note this especially for the benefit of those practitioners who, in treating inflammations, invariably administer active cathartics as the first measure. The course to be pursued with each form of the disease as arising from the different causes, is laid down at length, and much space is devoted to chronic peritonitis and its treatment, in its idiopathic and its strumous forms.

Obstruction of the bowels is so different a disease in its symptoms, progress, and termination, according to the pathological condition which has given rise to it, that it can scarcely be described in a regular and systematic manner. To distinguish cases arising from these different causes is of the utmost importance, for the time is short in many of them during which we can be of service; the disease passes rapidly to a fatal termination, while the course we are to pursue will be determined entirely by the conclusion to which we come upon the origin of the disease. We transcribe, therefore, some remarks which may guide us in making so important a decision as that upon the seat and character of the obstruction in these cases; they are somewhat long, but we cannot abridge them and do justice to the author:—

"Our first business in cases of this kind is carefully to explore the abdomen, in order to ascertain if any hernia exists. If this examination, which ought *always* to be most carefully conducted, reveals nothing of the kind, we proceed to ascertain, as far as possible, the seat and character of the obstruction, by examination of the degree of tenderness of the abdomen or of any part of it, considered in connection with the character of the pulse, the position of the patient, and the degree of pain caused by motion. Should a rather sharp and hard pulse, with considerable pain, aggravated by pressure or motion, induce us to believe that there is some peritoneal inflammation, we must not infer that such inflammation is the primary cause of the obstruction, as the very existence of the obstruction may of itself give rise to inflammation, especially if active purgatives have been used. If, however, there be no sign of inflammatory action, we may conclude that the obstruction is caused either by accumulation in the bowel, by loss of contractile power, as in colic, or by twisting, intussusception, or constriction by some bridle of false membrane. Our next examination should be as to the degree of tumescence of the abdomen, for in this respect we observe two opposite conditions; in the extreme case, for instance, of obstruction in the duodenum, the abdomen is flat, or even sunken; in the opposite one, of obstruction at the sigmoid flexure, we have a very humid and resonant abdomen; intermediate obstructions will give intermediate degrees of fulness. Sickness, again, is a very important symptom. When the obstruction is high up in the canal, sickness will be early and incessant; when it is in the colon there is no sickness, except what may be excited by irritating medicines, till the obstruction has lasted some days. In obstruction in the course of the lower part of the jejunum or ileum, we have early sickness, but not so immediate or so urgent as in the case of the duodenum. The condition of the urine is most important as regards the diagnosis of the seat of the obstruction; when the obstruction is high up, as in the duodenum, the quantity of urine is so small, or rather the suppression so complete, that cases of this kind have been mistaken, and that too by men of experience, for ischuria renalis; whereas, when the stoppage has been very low down, as in the sigmoid flexure, for instance, the urine is abundant and clear. In the first case, the suppression of urine may, in a great measure, be accounted for by the sickness; it may be observed, however, that sickness as ordinarily observed, independent of mechanical occlusion near the stomach, never suppresses the secretion so completely. In the case of obstruction in the descending colon, as there is no sickness, and as there is delay in the passage of its contents along the intestinal tube, there is abundant opportunity for absorption; and therefore, from the large quantity of fluid taken up by the veins, the quantity which passes out becomes large.

There is another circumstance which deserves investigation when we would ascertain the character or seat of the obstruction, and that is the degree of contraction of the lower bowel as carefully explored by a bougie, or the œsophagus tube. When sudden obstruction takes place in any part of the alimentary canal, it generally happens that the whole of the bowel below this part speedily and even forcibly empties itself; and this, perhaps, applies more particularly to the small intestines, where obstructions, when they do occur, are generally from twisting, intussusception, or acute inflammation, as enteritis. This not only produces the flatness of the abdomen above alluded to, but even a forcible contraction of the rectum, such as in one instance to have induced a doubt of the diagnosis of obstruction high up in the small intestines, from the fact that it was almost impossible to introduce the tube or even the finger in the rectum; so forcibly did the bowel contract through its whole course below the closure. And the same thing occurs in sudden occlusion, or sudden stoppage from inflammatory affection in the large intestines; thus, in those unfortunate cases in which this mischief ensues from the presence of a foreign body in the appendix cœci, the whole of the large intestines completely empty themselves, and afterwards no action takes place. When, however, the stoppage takes place from chronic thickening or contraction, or from malignant disease—occurrences which are more likely to take place in the large intestines—the bowel often loses its contractility below as well as above the seat of obstruction; and, therefore, the rectum, upon examination by the finger, will often be found dilated; so that upon the introduction of the œsophagus tube it will often coil upon itself in the pouched bowel, which may lead to a belief that it has passed a considerable distance up the canal. This condition rather favors the supposition that the obstruction is produced by chronic or malignant disease; seated, probably, in the large intestine. * * * Examination of the lumbar region is also important in determining the seat of obstruction; when it is in the small intestines, the cæcum, or even the ascending colon, there will be no great fulness in the right loin; but if it be in the transverse or descending colon, we generally find a bulging in that region, which, when the obstruction is remote (as in the descending colon or sigmoid flexure), will generally be very resonant on percussion, from the accumulation of flatus; but if the stoppage be nearer, as in the transverse colon, it may be dull from the accumulation of fecal matter. If, upon similar examination, the left loin also be found bulging, the obstruction is in the sigmoid flexure, and if there be also great resonance, it is probably at its termination in the rectum."

To do our patients no harm is one of the principles of the practice of medicine often violated, we fear, and never oftener than in the class of cases under consideration. How often do we see such cases in which one cathartic dose after another has been administered in the vain effort to force the obstruction, without reference to its nature, and which produce only reversed peristaltic action of the intestines, increased pain and irritation, if not rupture of the weakened and distended bowel above the point of obstruction, and consequent death. In how many cases of hernia is a fatal result caused by pursuing this course, and by repeated and ill-advised resorts to the taxis. Such a blind and routine application of cathartics is justly deprecated by our author; in regard to prognosis he says: "The fact of much purgative medicine being in the intestines is not to be overlooked, and constitutes an unfavorable element." In speaking of treatment, he quotes Dr. Copland in favor of mild and unirritating means, and gives an instance from Bransby Cooper of a fatal result following a single purgative. And it is evident that in those cases "in which the constipation is the effect of a conservative arrest, on the part of nature, of the peristaltic action of the intestines, the action of a strong purgative destroys the only chance of escape for the patient." We cannot follow all the details of treatment as laid down for the different forms of the disease; its general nature can be gathered from the above; opium, in full doses, is greatly relied upon in many instances.

This class of diseases closes with a chapter on Cholera Infantum by the American editor; the excellent work of Dr. Condie upon Diseases of Children is too well known among the profession to make it necessary to remark upon this disease here, which is of course treated of substantially the same as in that work.

Among all the questions which have occupied the attention of the profession during some years past, none has surpassed in interest that relating to the identity or non-identity of typhus and typhoid fevers. The question has been several times definitely settled! the honor of accomplishing that desirable work has been claimed in our own country for Dr. Gerhard, and abroad for Dr. Jenner; while we think that the body of the profession yet remains divided upon the subject. It would seem, from reading the writings of those who believe these two forms of fever to be distinct diseases, that there is no need for any want of unanimity upon this question, there are so many opportunities of collecting facts relating to it, and the diseases differ so much in their commencement, course, symptoms, and lesions found after death, that it must be easy to decide between them. They point out the differences to be, in regard to commencement, that typhus is far more sudden in its onset and much sooner reaches a severe form of disease—that, in regard to duration, typhus runs its course much more rapidly than typhoid, and that the symptoms differ materially in regard to two points. The eruption in typhoid is said to be rose-colored and confined to the trunk; in typhus, it is best defined by the name of "mulberry rash," and it is seen on the face and extremities, as well as on the body; in typhus there are no symptoms pointing especially to the abdomen, while in typhoid they are so frequent as to have given to the disease the names of "enteric" and "dothin-enterite," tenderness and diarrhœa being always present, and hemorrhage from the bowels of frequent occurrence. After death, ulceration of Peyer's glands is constantly found in the one and not in the other. But the question is not so easy of solution; even some of these writers will not bear a critical examination; one of them, in speaking of the cases of eruption, says that in one case it presented a "combination of the eruptions" of the two forms of disease, and he believes that the follicles of the intestines and mesenteric glands "do not always continue unaffected in typhus."* And there are many writers who do not see any reason for doubting the identity of these diseases, and see in the difference of symptoms and of post-mortem appearances only such variations as are usual to all diseases in different constitutions, and under the varying external circumstances in which the patients are found. Probably the great majority of the profession do not have an opportunity of forming a judgment upon the subject from facts occurring under their own observation; such will be influenced by the observations and opinions of others, and for their benefit we give the opinion of the author, whose great experience entitles it to weight, while we are certain no one will object to the practical inferences he draws:—

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* Clinical Reports on Continued Fever, based on analyses of one hundred and sixty-four cases, with remarks on the Identity of Typhus and Typhoid Fevers, by Austin Flint, M. D., Professor of Principles and Practice of Medicine in the University of Buffalo, 1852.

> "The conclusion which it appears we may most legitimately draw from our present information upon this subject is, that in the fevers in which the mulberry-colored and livid spots are present, there is a greater tendency than in others to assume the low, sinking form, and perhaps a greater liability to head affections, but that, nevertheless, there may and frequently does occur, severe bowel irritation, with inflammation and ulceration of the lower portion of the ilium. When there is the rose-colored rash, on the other hand, there is almost always great bowel irritation, and not such early depression from the effects of the poison; but the frequency with which one form of the disease has been found to occur side by side with the other in many epidemics, though it may not have done so in all, and the almost imperceptible differences by which they appear to be distinguished in some instances, seem at present to preclude the belief that they are specifically different."

These doctrines have a bearing upon the treatment of the disease, for it can only be guided to a safe termination by the application of principles deduced from a consideration of all its forms, and "therefore there is more danger than advantage in dividing this disease into endless varieties, and apportioning to each its peculiar mode of treatment." It can scarcely be expected that anything new should be presented upon the treatment in this work; it is based upon the same principles as are generally taught, that of assisting the various organs in eliminating the morbid poison, and in obviating the tendency to death. We shall notice only one or two practical points. In regard to the possibility of cutting short a continued fever in its commencement by some of those violent measures which have been recommended, our author expresses his doubts—thinks they are hazardous, and that cases in which they have appeared to be efficacious were only cases of "ephemeral fever occurring where continued fever was to be apprehended." In the direction of regimen for the patient, he is strongly in favor of plenty of fresh air; this would seem superfluous did he not state that there was some difference of opinion upon this point, and that the facts he brings forward to show the influence of bad ventilation in increasing the rate of mortality in this disease, are not unnecessary. If there is any truth in the theory of a morbid poison being present in the blood, the importance of giving every assistance to organs so important as the lungs in eliminating such matters, cannot be too highly estimated. But fresh air has not yet triumphed over old and musty prejudices, nor are its virtues, as a curative agent, everywhere acknowledged; and we are glad to see a powerful writer in Germany enter the lists in its favor, in the person of Stromeyer, the celebrated surgeon and chief physician of the Hanoverian army, who has lately published a work on the beneficial effects of thorough ventilation in continued fever.*

The same class of remedies we have spoken of in connection with rheumatism, are highly recommended by the author in the treatment of fever.

> "They have generally been regarded as simple diaphoretics and diuretics, but they also tend to obviate that liability to capillary obstruction which is among the earliest effects of the morbific agent. * * It is possibly to their action upon the extreme circulation that their effect upon the secretions is mainly to be attributed."

They are recommended on the principle that "the morbific agent in fever acts mainly upon the blood, and destroys its natural affinity for the tissues with which it is brought in contact in the course of the extreme circulation." Those who have read Dr. Bird's work can have no doubt of the efficacy of this class of remedies, and of their adaptation to the disease under consideration; they are *alteratives* in the truest sense of the word, and, whatever good they may do, they are certainly less injurious than small and repeated doses of mercury continued until the gums are affected, which, in continued fever, cannot but decrease the chances of the patient's recovery.

There is a practical point in regard to one of the complications of continued fever, which was first pointed out by Dr. Stokes, and which cannot be too strongly impressed upon the mind of the practitioner; it is, that bronchial congestion and pneumonia, occurring in the course of fever, require very different treatment from the primary diseases; the congestion being looked upon as the result of that general tendency to obstruction which is one of the effects of the morbific agent, and as a part of the general disease, and therefore not requiring venesection and mercury for its cure.

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* Ueber dem Verlauf des Typhus unter dem Einflusse einer Methodischen Ventilation, 1855. See Medico-Chirurgical Review, xxxv. p. 119.

"But it may be urged that the physical signs in both cases are the same, and in both we have the general symptoms of fever. The way to escape this difficulty is to remember that it is the whole condition of the patient that we have to deal with, and not *only* the bronchitis, or pneumonia, or other local inflammation; and, therefore, we must be guided, as to the use of depletory and other antiphlogistic measures, by the probability of their tolerance, as evinced by the greater or less degree of prostration, by the tongue, and, above all, by the pulse. * * * The existence of pneumonia as a complication in fever ought never to deter us from the use of support and stimulants when we have evidence of failure of the powers of life."

The complications of head and abdominal symptoms with fever are fully considered, and plain directions given for the management of the patient and conduction of the treatment through the whole course of the disease, while the chapter upon this subject closes with the admonition to "avoid officious practice."

One of the last chapters in the book is a brief one upon epidemic cholera. The following extract shows that the author agrees with the latest theories upon its nature:—

"This disease, when it runs its full course, terminates in a state which is unquestionably one of fever, and, as that fever is often attended by a characteristic eruption, it appears to approach more nearly to the eruptive fevers than to any other class of diseases; yet, to avoid the imputation of theory, we have not connected it with any."

There is no specific lauded for its treatment, nothing given more than the course generally recommended by standard writers: opiates and astringents early in the disease—to "*check the diarrhœa*" being the indication; while in the state of collapse little confidence is placed in anything, the probability being that, in this condition, medicine is not taken into the system. This mode of treatment is directly opposed to that known as the "eliminative," which consists principally in repeated doses of castor oil or other aperients, and which has been highly lauded in some quarters. The following just remarks are made upon it:—

"There can be no stronger proof of the great fatality of this disease than the variety of remedies which have been announced as of certain efficacy, and of which the worthlessness of most, and the perniciousness of some, have been found to be as certain. In the treatment of this disease, all theories must be discarded. Many opinions which have been entertained as to its essence might, at first sight, appear as harmless as they are weak, were it not that they have been made the grounds of the most pernicious treatment. Of this kind is the notion that a material poison has got into the blood, which must be driven out of it, that recovery may take place."

We have been induced to call attention to this subject, because a reviewer of the work* "hopes that, before the publication of a second edition," the author will discover the benefits of the eliminative plan of treatment. This might have undue weight with those who did not know that the author of that review is one of the chief supporters of the treatment in question, and has published a work in favor of it. Some facts have been collected upon the comparative results of treatment in this disease, which bear upon this point, and, as we do not think they have been sufficiently brought before the profession of this country, we insert them here. They are taken from the report of the committee on the disease as it appeared in London, presented to Parliament in 1855.† The tables show the proportion of deaths under the different modes of treatment pursued.

TREATED WITH	PER CENT. OF DEATHS.
Eliminants	71.7
Stimulants	54.
Alteratives (calomel and opium)	36.2
Astringents (chalk and opium)	20.3

The following table presents the same comparison in regard to cases in the collapse stage :—

TREATED WITH	PER CENT. OF DEATHS.
Calomel and opium	59.2
Calomel (large doses)	60.9
Salines	62.9
Chalk and opium	63.2
Calomel (small doses)	73.9
Castor oil	77.6
Sulphuric acid	78.9

The facts are too striking to need any comment, especially in the first stage, when medicines may be presumed to act more certainly, either for good or evil.

We have passed over entirely many subjects of interest in our remarks upon this work. Diseases of the heart, of the nervous system, of the liver and its appendages, remain unnoticed, and our limits prevent us from extending this article to a greater length. We have not omitted these subjects because they have been any less ably treated than those noticed; there is much in them worthy of high commendation, and which will be of essential service to any practitioner who carefully studies them. Yet we cannot be unbounded in our praise; in the chapters on renal diseases, we do not think the recent improvements in urinary pathology have been presented to the extent which might have been expected, and the chapters on dysentery and on delirium tremens are not worthy of the author. Dr. Condie has added a chapter on yellow fever, which presents a compendious view of the disease and its treatment, and is all that could be expected upon the subject in so small a space. We are sorry that the American publishers have not shown themselves as careful in this work as they usually are in works issuing from their press; it abounds in typographical errors, which, although not injuring the sense, are displeasing to the eye, and it is a pity that a work should be issued with such blemishes as ordinary proof-reading would have removed.

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* Medico-Chirurgical Review, xxxiv.

† Medico-Chirurgical Review, xxxi. p. 104.

In closing, we cannot but express the hope that we have accomplished what we had in view at the commencement: to present such a general view of the work, with such extracts from it, as would enable our readers to judge of its merits themselves. Trusting to their judgment, we do not fear that they will sustain us in our general estimate of its value as a text-book for the student, and a work of reference for the practitioner. J. C. R.

ART. III.—*Manual of Chemical Physiology.* From the German of Prof. C. G. LEHMANN, M. D. Translated, with notes and additions, by J. CHESTON MORRIS, M. D. With an Introductory Essay on Vital Force, by SAMUEL JACKSON, M. D., Prof. of Institutes of Medicine, in the University of Pennsylvania. Illustrated with forty wood-cuts. Philadelphia: Blanchard & Lea, 1856. 8vo. pp. 331.

To urge that at least a general knowledge of the subjects discussed in Dr. Lehmann's book, is essential to a scientific medical education would be a task no less superfluous, at the present day, than to insist upon the competency of our author to impart such knowledge. If it was our privilege to commend an original American treatise upon this department of medical science, with merits equal to the manual which Dr. Morris has so faithfully served to the American student from the German, we should relish the performance with a much keener zest. While we acknowledge a certain degree of indebtedness to the labors of the European profession for the advancement of our home medical literature, we are very far from conceding our dependence upon our transatlantic brethren for the development of a vigorous standard of American medical literature. We have hitherto relied upon, and appropriated to the progress of medicine in our own country, the materials of European research, to an extent much beyond what we were dependent upon them for. The United States is abundantly prolific in authors, eminently endowed with every qualification essential to independent and accurate scientific investigation; but, unfortunately for our national reputation, the most signally gifted of the corps have evinced a much greater proclivity to become translators and annotators, than the authors of original volumes, constructed upon an independent basis of personal observation and research.

Dr. Lehmann's book loses none of its intrinsic excellency, from the fact that it supplies a vacuum in its peculiar department, which should, so far as this country is concerned, have been supplied by an American treatise. Nor should the labors of Dr. Morris be the less appreciated because he has chosen to employ his talents in rendering a book of foreign production accessible to the American reader, rather than in framing an original treatise from the materials of his own research.

So far as concerns the translator's province, Dr. Morris has achieved his task in a most commendable style; but without spending a judgment in reference to the merits of the editorial notes with which the book is interspersed, we are bound to insist that the author's design would have been quite as completely attained independently of such additions.

It is far from our present design to attempt anything like a critical analysis of the contents of the book before us; the limited space allotted forbids that we should do more than offer a few detached observations upon some of the leading characteristics of the work.

The translator has added interest and value to Dr. Lehmann's manual, by enriching it with an exceedingly able introductory essay on the human organism and its forces, with remarks on Prof. Lehmann's doctrine of vital forces by Prof. Jackson. We heartily sanction some of Prof. Jackson's criticisms, and when appropriate, will refer to the subject again.

Prof. Lehmann sets up no higher pretension in behalf of the book he has presented, than "a little work" embodying "the positive facts which can now be looked upon as the certain possessions of physiological chemistry."

Although we are not prepared to give our assent to every proposition urged by Dr. Lehmann, we nevertheless conceive, after a careful perusal of the work, that the pretensions indicated in the preface, are greatly more than sustained.

In the introductory chapter, under the head of "General Observations," the author clearly and forcibly defines the scope and province of the science in which he has embarked.

The end and aim of all investigation and research concerning the human organism, in its normal relations, are to promote medical science and art in their healing ministrations. To appreciate and estimate the functional perversions and material lesions, which constitute disease, it is evident we cannot make ourselves too familiar with physiology, in its physical, chemical, and vital aspects. Chemical physiology teaches us the chemical elements out of which the tissues of the living healthy organism are composed, the nature of their combinations, and the laws of their reactions, in effecting the changes which take place within the recesses of the animal body under its healthful play. This knowledge is practically valuable just in so far as it aids in the elucidation of disease, by enabling us to recognize and appreciate that which is pathological. We cannot yield an unqualified sanction to the propriety of blending the chemistry of disease and the chemistry of health into an indissoluble science, as Dr. Lehmann proposes.

He says in his introductory chapter—

> "We consider so-called pathological chemistry, not as a separate science, but as an integral part of physiological chemistry, because no sharp boundary can be drawn between the two, and because, further, the laws which find their application in the illustration of life-phenomena are the same in physiological and pathological circumstances, and the difference of the phenomena depends entirely on the difference of the external conditions."

Dr. Lehmann may be quite correct in assuming that no *sharp* boundary can be drawn between the two, but we feel compelled, nevertheless, to admit that there does exist a boundary, at least as distinct as that which separates some other sciences so widely that Dr. L., nor any other medical philosopher, considers either an integral part of the other. Just as morbid and healthy anatomy are separate sciences, from the necessary modifications of the forces and essences which determine characteristic features, so must we have a morbid and a healthy chemistry as separate and divisible sciences. Dyspepsia cannot exist without a perversion of the chemical conduct of healthy digestion ; tubercular infiltration cannot take place so long as physiological laws have complete dominion over organic changes ; the laws under whose operation the morbid elements of urine are elaborated in glucosaria and albuminuria, cannot be illustrated by a chemical science, which is purely physiological. The very essence of disease is a perversion of the chemical laws under which organic processes are carried on in health.

"The science of physiological animal chemistry," says Dr. L., "divides itself into three sections: The science of the chemical substrata, the science of the chemical fluids and tissues, and the science of the zoo-chemical processes."

The first section, under the head of "Organic Substrata of the Animal Organism," occupies about sixty-seven pages. We could not, perhaps, give an adequate idea of the author's clear, forcible, and philosophic style of treating this department of his subject, without inserting a few of his own passages.

"It is this intimate and peculiar connection of all their properties which imparts to the different elements forming the substrata of the animal frame their *physiological* as well as their chemical character. It is the unity of the material relations which occasions the entire behavior of a substance towards all heterogeneous substances and physical influences, as well as the manner of its participation in the chemical processes of life. Since pure chemistry has shown us that the laws which govern the combination of different atoms in stones and rocks, are no other than those through which the existence of the complex atoms of animal and vegetable substances are governed; the forces, also (to which they are subject in the animal organism), should lead, under similar conditions, to analogous consequences, corresponding to the chemical compounds. The essential character of a substance remains then the same, whether it be subjected to the influences of atmospheric forces, or the different operations of our laboratories, or the peculiar conditions of life-movements. No element is enchanted in the animal frame; its relation in the sphere of life remains ever coincident with its chemical quality. The whole of zoo-chemistry affords empirical proof of the justice of this proposition; for we never find that substances chemically entirely different have similar physiological functions, or, on the other hand, that substances of similar physiological *value*, are widely separated according to chemical principles. Hence it is an established proposition that the *physiological importance of a body is dependent entirely on its chemical constitution.* Hence we can follow in zoo-chemistry no other system or mode of division than a chemical one, for the latter must at the same time take account of physiology, and hence will always be a physiological one also."

If to the doctrine here enunciated there can be urged any objection, it is the author's obvious propensity to subordinate vital to chemical and physiological forces. If it is certain, as he says, that no element is *enchanted* in the animal frame, it is not quite certain that these elements, when subjected to experimental treatment in the crucible and flask, entirely escape the influence of such enchantment. The information which belongs to this section is admirably condensed, and presented in a lucid and forcible style, and the pages devoted to the subject are filled with sound practical teaching of the chemical characters and physiological relations of the numerous elementary substances which play a part in originating and sustaining the operations of the animal organism.

The next section, under the title of "Phlegmato-Chemistry," is devoted to the science of the animal fluids, and occupies about 77 pages. It would be difficult to exaggerate the practical importance of this as a whole, or select from it one chapter meriting from the reviewer higher commendation than another. Owing to the greater intrinsic practical importance of the blood and urine, these subjects are perhaps more elaborately, and consequently more satisfactorily discussed than the minor subjects embraced under the same head.

Twenty-five pages are devoted to a consideration of the "Physical Properties, the Chemical Composition, and the Physiological Offices of the Blood." In view of the fact that this fluid is the true morphotic medium, the primordial source of organic forms, which ultimately constitute the aggregate organism, and in view of the able and logical manner pursued by our author in embodying the chemico-physiological doctrines of the blood, we cannot too earnestly commend an attentive study of this chapter to the student of scientific medicine. This is a difficult, but vastly important, and hitherto a most deplorably neglected source of medical knowledge. From our limited space, and in consequence of the difficulty of selecting one passage more to our liking than another, we must forego the privilege of presenting extracts from this important division of Dr. Lehmann's manual.

After treating a number of minor, but very interesting topics, in a highly satisfactory manner, Dr. L. treats his readers to a most interesting analysis of the urine, with its physiological destiny and pathological susceptibilities. In view of the brilliant pathological achievements which an intimate knowledge of the composition of the urine, and a knowledge of the causes which modify its composition, have developed recently, no cultivator of the healing art can be excusable for omitting to avail himself of so important a stepping-stone to a thorough knowledge of urology as this article supplies. Fifteen pages are devoted to this subject, and every line is replete with most valuable information.

Histo-chemistry, or, the science of the animal tissues, is next treated of, but rather summarily. It is disposed of in fifteen pages, and discussed in a rather micro-chemical manner. Indeed, the microscope must constantly supersede the crucible and flask in histological investigations. We next come to the interesting subject of zoo-chemical processes, with an introductory chapter of four pages, presenting Lehmann's views of "the forces and laws of the organic movements."

We have already referred to Prof. Jackson's able strictures upon these views, presented through his essay occupying the front of the book.

As to the main matter of controversy, to our mind, Dr. Jackson has very successfully refuted the arguments adduced by our German philosopher, to sustain his position in reference to a vital force. At page 232, Dr. L. gives us a fair indication of the stand-point from which his conclusions upon this subject are deduced. He says:—

> "But these few hints may suffice to show that it is as impracticable as it is unscientific in physiological chemistry to make use of a so-called vital force for the explanation of the animal-chemical processes, and to refer the casual sequence of the phenomena to a force thus overleaping all bounds of conformity to law. In physiological chemistry, *explanation* can mean nothing further than a reference to established physical laws; as soon as physiological chemistry allows a vital force, it resigns all effort to be numbered among the exact sciences."

However much Dr. L. may be disposed to exalt his favorite science as an agency in carrying on the movements which distinguish organic from inorganic bodies, animal organisms from vegetable substances, he has certainly strayed into a striking blunder in attempting to repudiate a principle which rests at the very foundation of every zoo-chemical process. Although many movements which characterize living organisms are purely the results of chemical combinations and their reactions, it is nevertheless very certain that these characteristic movements would cease upon the withdrawal of an essential organic force. Such a doctrine is strikingly incompatible with the physiological history of embryology. The highly chemical function of digestion can be but poorly imitated independently of a vital animal force. In short, the great animal laboratory, which is but an embodiment of chemical elements, exhibits no chemical phenomenon, under its physiological operations, that is not due to an inherent vital constituent.

As the space which remains at our command is too limited to admit of justice being done to Dr. L.'s able article, of twelve pages, upon "Metamorphosis in General," we will hasten on to a brief notice of the three important articles which succeed, and which will conclude our pleasant task. These subjects are examined with unusual depth and diffusion, and the main doctrines insisted upon are, so far as we are capable of deciding, altogether orthodox.

The mechanical, chemical, and physiological conditions connected with digestion as a primary process, are stated with admirable clearness and force. In its simplest presentation, we would understand this process to imply such action of the digestive fluids, gastric, pancreatic, hepatic, and intestinal, upon alimentary substances as will prepare them for absorption. Taking this as a starting point, and regarding the above-named fluids as the essential agents of digestion, Prof. Lehmann furnishes us a very satisfactory and scientific exposition of the entire digestive function.

It would seem that Dr. Lehmann does not subscribe to the popular doctrines of Bernard, in reference to the digestive agency of the pancreatic fluid. He says:—

> "We have already seen (p. 173) that it is not the pancreatic fluid, but the bile which renders it possible for the fat to penetrate through these moist membranes. According to recent investigations, animal membranes become capable, by means of a solution of soap or of bile, of allowing fat to penetrate through them without the application of external pressure. As, then, in animals whose bile is brought to the surface by means of a fistula, very little fat is absorbed, there can scarcely remain any doubt that it is the bile which causes the absorption of fat, although the laws concerned are not yet fully ascertained."

Dr. L. defines the respiratory process to "consist mainly in an exchange of certain gaseous substances, which takes place in peculiar organs, lungs, gills, or tracheæ, between the blood and atmospheric air; in considering this exchange, the knowledge of the amount of the gases to be exchanged in the blood and in the air must first be ascertained." The composition of the atmosphere is of course well known, but the amount of gases in the blood is not at all times so easily ascertainable. The chemico-physiological nature of this function is very thoroughly elucidated by our author. He takes issue, however, with some of the highest modern authorities in this department of science.

While he does not repudiate wholly the doctrine of a consumption, or rather conversion of gases in the metamorphosis of animal matter, he virtually rejects the doctrine that animal heat has any essential connection with so-called pulmonary combustion. The theory established by Lavoisier, was a very plausible and inviting one to physiologists, and was based upon the discovery of a true combustion process, which was naturally referred to the lungs, since it was ascertained that oxygen disappeared from the inspired air and was replaced, in expiration, by carbonic acid and water.

And to adopt the language of a recent critic, "the process was regarded as an actual combustion of carbon and hydrogen in the lungs, resulting in the evolution of heat and the production of carbonic acid and water, exactly as it would happen in the furnace or the combustion-tube." Lehmann admits that the carbonic acid exhaled is the result of an internal combustion, but refers its production to the functional organs without dependence upon the mere process of respiration. He does not, in a word, sanction the doctrine that the lungs constitute a perpetual furnace for the actual combustion of certain substances, denominated elements of respiration, as a means of preserving in the animal body a given necessary quantum of caloric.

He has modified the theory very much to our own thinking; we have never been able to discover much science in the idea of supplying sugar and fats to the blood, as oil is poured into a lamp, simply to sustain combustion and generate animal heat. Dr. Lehmann has discussed this subject ably, and greatly to our satisfaction.

Nutrition is next brought forward as the last of the zoo-chemical processes.

This is viewed by our author as properly forming the sum of all the animal processes before considered. He divides the substances which minister to the nutrition of the body into four groups: albuminous substances, fats, carbohydrates, and certain salts, and considers very justly, we think, that "they must principally be contained in the material necessary for the maintenance of the life-functions, *i. e.*, in the articles of food."

Metamorphosis of animal tissue implies waste or disintegration as well as growth and repair, and hence the renewal must be regulated by the waste. An article of food, in which is mingled the four named bases, is rendered accessible to the wants of the changing organism just in proportion as the great factor to nutrition, "digestion," is efficiently accomplished.

Nutrition, as a process accomplished, consists in an appropriation of tissue, materials, or elements derived *ab externo*, in conjunction with alimentary supplies. We may safely assert that the assimilating organs are capable, under no circumstances, of effecting the transmutation of a nutritive element, or generating *de novo* a plastic principle. "A living body," says Pereira, "has no power of forming elements, or of converting one elementary substance into another; and it therefore follows that the elements of which the body of an animal is composed, must be the elements of its food."

Dr. Prout says: "No organic agent has the power either of *creating* material elements, or of *changing* one such element into another."

Dr. Lehmann inculcates the same rational views upon this point, and enters somewhat minutely into the composition of numerous articles requisite for animal nutrition, and points out the various circumstances and conditions which tend to effect nutritive relations, in a style that is most forcible and convincing. He frankly admits, however, that there has, as yet, been accumulated but a limited data of trustworthy facts, in respect to nutrition as a subject of chemico-physiological inquiry.

We will quote his concluding lines upon this, the last subject he discusses:—

> "As the science of the process of nutrition is the culminating point, or final object of all physiologico-chemical investigations, it is not surprising that this chapter has afforded relatively the least scientific profit; for all the chemico-physiological investigations hitherto made, have only tended to establish, first, a firm basis for a review and examination of this process at large and in general. We are still, however, so far behind in the theory of nutrition, that we must content ourselves with investigating the balances between the recepta and excreta, in order to form even the outlines of a representation of the tissue-metamorphosis in general. We must look to the future for an investigation of the internal exchange of elements in the process of nutrition, of its individual members and stages, of the so-called intermediate tissue-metamorphosis, in order to obtain an exact scientific comprehension of the chemical phenomena of life."

The editor's appendix, embracing a number of physiological topics, with no pretensions beyond a compilation of commonplace statements, finishes the book. The impression we have derived from a careful perusal of Dr. L.'s manual is, that the science to which it is devoted has fallen into exactly the right hands to render the labor of reading the book both interesting and profitable to every one not already a proficient in chemical physiology. J. P. H.

ART. IV.—*On Bandaging, and other Operations of Minor Surgery.* By F. W. SARGENT, M. D. 2d edition. Philadelphia, 1856.

A WARM welcome will be accorded to the second edition of Sargent's *Minor Surgery.* In reviewing its pages, we remember, with a feeling nearly akin to gratitude, the pleasure and advantage with which, as a student of medicine, we first studied this serviceable little work. A greater facility for acquiring information in relation to subjects which, from the contracted course of study pursued in this country, are but slightly alluded to in the lectures upon surgery, and for which the student would in vain look in the most accessible surgical treatises of the day, has ever appeared to us a great desideratum. Fresh from the oral teachings of his college, the young surgeon goes forth to encounter preliminary difficulties upon the threshold of his professional life, which an intimate knowledge of the minutiæ of surgery, if we may so term them, contained in this valuable work, is well calculated to alleviate, if not entirely to overcome. The larger treatises of systematic writers on surgery embrace, of course, the subjects treated of in the book before us; and in the lecture-room the student may hear the Professor insist upon their importance, and eloquently and learnedly expound their uses, and even, in some cases, illustrate their application. These splendid and abundant sources of knowledge might induce the inexperienced to regard the labors of our author as superfluous; while those who have made trial of all three, will reason more correctly, and conclude that the existence and demand for treatises of this elementary character proves the insufficiency of the first two aids for the beginner.

The Professor presupposes a degree of preparation on the part of the pupil, which renders it unnecessary for him to dwell at any great length on points so elementary. In view of these objections, the youthful student, naturally, and to his profit, turns from voluminous works and the lecture-room, to such aids as are adapted to his inexperience.

The author has selected, arranged, and elucidated the subject-matter of his work in a masterly manner. Here the student will find nothing but what it is essential he should know well, and never forget—the alphabet of a surgical education. Works on operative surgery contain much that is useless but attractive to the beginner, by which his mind is apt to be seduced from its devotion to legitimate subjects, which become distasteful by comparison. The inconvenient size of these volumes is also an apparent and serious objection.

By a careful comparison with its immediate predecessor, we find that the author has taken the opportunity not only thoroughly to revise, but has been enabled, by subsequent observation, to comprehend within its scope many useful additions; which, as is stated in the preface, by an increase in the size of the page, have been introduced without causing any enlargement of the volume. Much has been added, for instance, to that portion devoted to splints, and their application, to which Barton's, Bache's, Bond's, Fergusson's, Good's, Hays's, Kimball's, and Nélaton's are subjoined; and we also gladly notice Dr. Golding Bird's adaptation of electricity to medical purposes in the electric moxa.

For practical utility and comprehensive terseness of language, this volume has already earned itself a reputation; and it is almost a work of supererogation, upon our part, earnestly to recommend it to those for whom it is designed—the younger surgeon and student. 𝔍. 𝔏.

ART. V.—*New Remedies, with Formulæ for their Preparation and Administration.* By ROBLEY DUNGLISON, M. D., Professor of the Institutes of Medicine in the Jefferson Medical College of Philadelphia. 8vo. pp. 769. 7th edition. Philadelphia: Blanchard & Lea, 1856.

A COMMENDATION of this well-known work of Prof. Dunglison would be an act of decided supererogation. The announcement of the *seventh* edition is sufficient evidence to our readers that the author's labors are properly appreciated by the profession, and nothing that we could say would add to the deserved popularity of this truly valuable book. "The chief remedial means which have obtained a place, for the first time, in this volume, either owing to their having been recently introduced into pharmacology, or to their having received novel applications—and which, consequently, belong to the category of "New Remedies"—are the following: apiol, caffein, carbazotic acid, cauterization and catheterism of the larynx and trachea, cedron, cerium, chloride of bromine, chloride of iron, chloride of sodium, cinchonicine, cod-liver olein, congelation, eau de Pagliari, galvanic cautery, hydriodic ether, hyposulphite of soda and silver, inunction, iodide of sodium, nickel, permanganate of potassa, phosphate of lime, pumpkin, quinidia, rennet, saccharine carbonate of iron and manganese, santonin, tellurium, and traumaticine."

ART. VI.—*The Microscope, and its Revelations.* By WILLIAM B. CARPENTER, M. D., F. R. S., &c. &c. *With an Appendix, containing the Applications of the Microscope to Clinical Medicine, &c.* By FRANCIS GURNEY SMITH, M. D., Professor of the Institutes of Medicine in the Medical Department of Pennsylvania College, &c. 8vo. pp. 720. Philadelphia, 1856.

ONE of the most beautiful books that has ever appeared from the prolific press of Messrs. Blanchard & Lea is that bearing the above title. Although originally not intended as a strictly medical work, the additions by Prof. Smith give it a positive claim upon the profession, for which we doubt not he will receive their sincere thanks. Indeed, we know not where the student of medicine will find such a complete and satisfactory collection of microscopic facts bearing upon physiology and practical medicine as is contained in Prof. Smith's appendix; and this, of itself, it seems to us, is fully worth the cost of the volume. The high standing of Dr. Carpenter as a physiologist and a microscopist is a sufficient guarantee of the general excellence and interest of the results of his large experience, which are here, for the first time, placed upon record in a connected form.

ART. VII.—*A Treatise on the Practice of Surgery.* By HENRY H. SMITH, M. D., Professor of the Principles and Practice of Surgery in the University of Pennsylvania, &c. 8vo. pp. 825. Philadelphia, 1856.

THE appearance of a work on the practice of surgery from the pen of the successor of Gibson, and Dorsey, and Physick, has very naturally created a little excitement in certain professional circles, where the merits and demerits of such productions form the staple subject of discussion. In our next issue we hope to be able to present our readers with such an analysis of the book as will enable them to form a correct judgment of the rank which it should take, both as a literary production, and, what it professes to be, a text book for the medical student, and a work of reference for the young surgeon in the responsibilities of early professional life.

PART SECOND.

Original Communications.

ART. I.—*The Pathological Effects of the Abnormal Conditions of the Kidney in Bright's Disease; its Symptoms, Diagnosis, Causes, Prognosis, Pathological Character, and Treatment.* By AUSTIN FLINT, M. D., Professor of Clinical Medicine and Pathology in the University of Buffalo.

(Continued from the September Number.)

THE abnormal conditions of the kidney in Bright's disease were considered in the last number of this review. At the close of that article the immediate effects of the structural lesions which had been described were arranged into the two following classes: 1. The abnormal transudation into the uriniferous tubes of certain of the elements of the blood. 2. A deficiency or absence in the urine of certain important constituents of that excretion. Entering now upon the consideration of the subject in another aspect, viz: as regards the phenomena developed by clinical researches during life, these immediate effects first claim attention as a point of departure for a brief review of the symptoms, diagnosis, causes, prognosis, pathological character, and treatment of the disease.

Immediate Pathological Effects.—1. Albuminuria involves the escape of a blood-constituent which does not enter into the composition of healthy urine. In fact, more or less of the serum of the blood is contained in the excretion. The transudation is believed to take place through the coats of the vessels forming the Malpighian tufts. In view of the tenuity of the coats of these vessels and their situation, lying loose and uncovered in the dilated extremities of the convoluted tubes, it is easy to conceive that mere congestion will suffice to give rise to *serous* in place of *aqueous* transudation. But the abnormal transudation is not limited to the blood serum. The *liquor sanguinis* may transude, probably, as a result of congestion alone, and, coagulating within the convoluted tubes, forms the fibrinous coats with which they are found to be filled after death, and which, washed away to a greater or less extent during life, are discovered by means of the microscope in the sedimentary deposit of the urine. Owing to the peculiar anatomical relations of the vessels forming the Malpighian tufts, fibrinous exudation in this situation has not the significance which it usually possesses elsewhere; in other words, it is not necessarily a result of the inflammatory process as the latter term is generally understood.

The delicacy of structure and exposed condition of the tufts are such that rupture not unfrequently occurs. The convoluted tubes become filled with coagulated blood. The ecchymoses, which are embraced among the varied abnormal conditions of the kidney observed after death, are thus produced, and, under these circumstances, hæmatine, and even blood-corpuscles, are found in the urine. These effects are more likely to occur in acute than in chronic albuminuria.

The effect of the serous transudation is to drain the blood of its albumen; hence, the source of the albumen found in the urine. That congestion alone is sufficient to occasion this transudation, is shown by the fact that albumen is found to exist in the urine in cases in which hyperæmia of the kidney is the only abnormal condition to be discovered after death. When the convoluted tubes are filled with solid deposit, whether from coagulated fibrin, hypergenesis of epithelial cells, or the exudation of fat, the pressure on the surrounding plexus of veins (the portal or inter-tubular plexus) necessarily induces congestion of the Malpighian tufts. Congestion is also incident to diminution or arrest of the secretory action of the kidney on the principle that the functional activity of an organ is a source of motor power affecting the circulation; a principle illustrated, for instance, by the occurrence of pulmonary congestion when respiration is arrested. Dr. George Johnson attaches much importance to this rationale, and comparatively little to the mechanical effect of pressure of the distended renal tubes on the inter-tubular vessels.

Serous transudation does not invariably occur in Bright's disease. Instances in which it is wanting are oftener observed when the kidney is found to be greatly atrophied.* Of course, if it does not take place, albuminuria does not exist.

Important secondary or remote pathological effects belonging to the clinical history of the disease, will be presently traced to the condition of the blood induced by the loss of albumen.

2. Retention in the blood of matters, which it is the office of the kidney to excrete, is an immediate effect possessing even greater pathological consequence than serous transudation. The obstruction of the renal tubes from the accumulation of epithelium, coagulated fibrin or fatty deposit, interferes with the elimination from the blood

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* Barlow, Elements of Medicine.

of those constituents of the urine which are separated by an excretory process as distinguished from transudation. This process, our readers need not be told, is performed by the cells within the renal tubes. According to Dr. George Johnson, in some cases the tubes lose their excreting epithelium, and hence elimination is impossible. Urea and uric acid accumulate, therefore, in the blood. Uræmia is induced.

Various remote pathological effects are attributable to the toxical action of the urea or its metamorphosis in the blood; and various symptoms are referable to this source.

Secondary or Remote Effects.—Various local affections are so often associated with Bright's disease that a pathological connection is logically established. The frequency of the association shows a bond of union—the existence of a law—not merely a series of coincidences.

General dropsy is an affection most frequently found associated. Œdema is said, by some observers, to appear first in the lower extremities, and, by others, below the eyes. It extends gradually throughout the subcutaneous areolar tissue in both the lower and upper extremities and over the trunk. The œdema becomes anasarca. Under these circumstances over the sternum is a convenient situation to demonstrate its diffusion. Dr. Barlow* says, that a collection beneath the conjunctiva of the lids giving rise to a swelling which projects somewhat over the lower lid (he terms it a "watery chemosis") is sometimes the first evidence of dropsy to be observed. Next to the subcutaneous areolar tissue, serum accumulates in the different cavities in the following order: peritoneum, pleural sacs, pericardium, arachnoid.

Effusion also takes place beneath the mucous tegument. In the lungs it gives rise to some of the phenomena of bronchitis. *Œdema glottidis* occurs in some instances.

The variety of general dropsy due to this disease is distinguished as *renal dropsy.* Affection of the kidneys is always to be suspected in patients affected with general dropsy. In general, the discrimination lies between *renal* and *cardiac* dropsy. Cardiac dropsy is attended by evidences of vascular congestion, and usually by palpitation and more marked embarrassment of respiration. But the chance or presence of disease of the heart is demonstratively determined by means of physical exploration. The dropsy in heart disease is due to obstruction; in Bright's disease mainly to alteration of the blood. The explanation commonly adopted, is, that the drain of albumen renders the blood *watery, i. e.*, reduces its specific gravity, and hence an abnormal facility of transudation. This is, doubtless, a correct explanation as far as it goes. Something may be due to obstruction in the capillaries incident to difficulty of circulation. Magendie showed that the *viscosity*, which the blood derives in part from its albumen, conduces to the facility with which it permeates the capillaries. Something may also be due to the local effect of the retained urinary principles in the blood. The diminution in the general forces carrying on the circulation may be another circumstance favoring dropsical effusion.

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* Op. cit.

The specific gravity of the blood-serum has been found to be reduced as low as 1.015, and even 1.010; the normal density being 1.030.

Other things being equal the dropsy may be expected to be proportionate to the amount of albumen contained in the urinary excretion.

It is important to bear in mind that dropsy, although so frequent, is not an invariable effect of Bright's disease.

Anæmia is a pathological condition very generally associated. It is manifested by the usual external characters, pallor of the prolabia and face, etc. The red corpuscles have been found to be diminished to 82 and even 61 in 1000 parts, the normal average proportion being 127. (*Andral and Gavarrett.*)

Serous inflammations, pericarditis, pleuritis, peritonitis, and arachnitis. These belong to a group of secondary effects generally attributed to *uræmia ;* in other words, they are among the toxical effects of retained urea and uric acid, or their metamorphoses in the blood. Frericks has enunciated a theory, that to give rise to serious results the urea must undergo conversion into the carbonate of ammonia. He sustains this theory by experiments on animals, injecting urea into the veins and the carbonate of ammonia. Urea, as such, he regards as a harmless constituent of the blood.* Experiments tending to show the innocuousness of urea have been made by several observers. Vauquelin and Segalas found the only result to be an increased secretion of urine. Dr. Todd injected half a drachm with no other effect; and Dr. Bence Jones remarks, that urea is, probably, not much more poisonous than nitrate of potash.†

Whatever be the explanation, the frequent co-existence of the serous inflammations mentioned is shown by statistical data. The fact of their occurrence as secondary effects of Bright's disease rests on clinical experience. Dr. Bright analyzed 100 fatal cases characterized by albuminuria with the following results, so far as concerns the co-existence of serous inflammations :* Pleuritis was found in 56 cases—in 40 being ancient, and in 16 recent. Pericarditis had existed in 23 cases —shown by old adhesions in 10, and the evidences of recent acute inflammation in 13 cases. Arachnitis was evidenced by opacity in 13 cases.

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* *Vide* Review, by Prof. Dalton, Buffalo Med. Journal, 1853.

† For cases in which urea accumulated in considerable quantity in the blood in Bright's disease without ill effects, the reader is referred to Dr. George Johnson's work, English edition, p. 199.

Pneumonitis is not a frequent complication. Dr. Bright's analysis developed traces of old pneumonia in 5 cases, and of recent pulmonic inflammation in 6 cases.

Pulmonary œdema is more frequent. This was present in 31 cases.

Pulmonary apoplexy is an occasional complication.

Phthisis is also occasionally associated, but not often enough to show any special pathological connection.

Vomiting and diarrhœa are frequently associated with Bright's disease, and in many instances they are prominent events. Obstinate vomiting was noted by Frericks in 11 of 42 cases. A rational explanation is, that these disorders are occasioned by an effort to eliminate, secondarily, retained urea. Experiments by Bernard and Barreswill show that, when the kidneys are extirpated in inferior animals, urea is eliminated through the stomach and intestines. The evidence of this fact is the presence of carbonate of ammonia. This may be formed from the urea within the blood or within the alimentary canal after the elimination, the latter being, perhaps, the more probable. Assuming the correctness of this explanation, the vomiting and diarrhœa are conservative, and to arrest them, were it practicable, would be a measure of doubtful expediency. Vomiting, even when present in a marked degree, is not attended with constant nausea, and is not incompatible with appetite. This fact I was led to notice in a case under my observation during the last winter (1855–56.)†

Various important and sometimes serious effects are manifested in connection with the nervous system. These effects are probably toxical.

1. *Neuralgia in Different Situations.*—In the case of a late distinguished American surgeon (Prof. Howard, of Columbus, Ohio), severe cephalalgia was a prominent feature before dropsical effusion occurred.

A late colleague in the University of Louisville (Prof. Palmer) has informed me of a case in which intense and persisting pain in the head, unaccompanied by the usual evidences of meningitis, led to an interrogation of the urinary excretion, and albuminuria was found to exist in a marked degree, although there was no œdema. The patient was a girl, five or six years of age. After death, extensive disorganization of the kidney was ascertained.

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* Guy's Hospital Reports, 1836.

† Case of McCran, Louisville Marine Hospital.

2. *Cramps in Lower Extremities.*—Dr. Barlow particularly calls attention to the occurrence of this form of nervous disorder.*

3. *Epileptiform Convulsions.*—A patient was admitted into the Louisville Marine Hospital (1855–56), who had, during the twenty-four hours succeeding admission, repeated attacks resembling epilepsy. She was a German girl, unacquainted with English, and nothing was known of the previous history. There was no œdema, but the urine contained an abundance of albumen. This disappeared in a short time, and the convulsions did not return. I have met with convulsions in the course of chronic Bright's disease. They were prominent in a case in which, apparently, recovery from the disease took place.

4. *Coma*, more or less profound, occurs in a certain proportion of cases, usually preceding a fatal termination of the disease. I have, however, known it to occur and continue for several days in a case of chronic Bright's disease, which ended, apparently, in recovery. In 30 of 70 of the fatal cases analyzed by Dr. Bright, the patients died with the evidences of some cerebral affection, either apoplexy, convulsions, or epilepsy. The occurrence of head symptoms is attributed to uræmia, the morbid products derived from the urea acting as a poison on the nervous centres.

5. *Amaurosis* is observed as an occasional complication. Landowry states† that more or less feebleness of vision almost always occurs. This statement is probably an exaggeration. In some instances it is the most prominent affection, and it may exist when the ordinary symptoms of albuminuria (œdema, etc.) are so slight that, without attention, they might escape notice. An illustration of this fact recently came under my observation.

Dr. Thomas Addison divides the varied forms of cerebral disorder connected with Bright's disease into the following five classes:‡ "1. A more or less sudden attack of *quiet stupor;* which may be temporary, repeated, or permanent, ending in death. 2. A sudden attack of a *peculiar modification of coma and stertor;* which may be temporary, or end in death. 3. A sudden attack of convulsions; which may be temporary, or end in death. 4. *A combination of the two latter;* consisting of a sudden attack of coma and stertor, accompanied by constant or intermittent convulsions. 5. A state of *dulness of intel-*

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* Op. cit., p. 393, Am. edition.

† In L'Union Médicale, 1850. (Grisolle's Path. Interne.)

‡ Guy's Hospital Reports, 1839.

lect, sluggishness of manner, and drowsiness, dimness of sight, and pain in the head, proceeding either to coma alone, or to *coma accompanied by convulsions,* the coma presenting the peculiar character alluded to." The author premises that "the general character of cerebral affections connected with renal disease is marked by *a pale face, a quiet pulse, a contracted or undilated and obedient pupil, and the absence of paralysis.*"

Certain affections are associated with Bright's disease, more or less frequently, with respect to which, at present, it must be considered as doubtful whether they sustain to it a relation of cause or effect; or whether the coexistence is either accidental, or both are due to the same general morbid condition.

1. *Structural Lesions of the Heart, Valvular Affections, Hypertrophy, or Dilatation.*—Perhaps the most rational view is, that the kidney affection is consecutive. It may be easily conceived that the congestion incident to obstructive heart lesions may favor the development of Bright's disease.

2. *Cirrhosis of Liver.*—Probably there is no relation of dependency existing between this and Bright's disease, but they are concomitant affections, both being perhaps due to the same general condition, which may be disease of the heart. Disease of the heart, liver, and kidneys are not unfrequently united, constituting what has been termed the "triple lesion." If cirrhosis of the liver coexist with Bright's disease, ascites will be present, and in degree disproportionate to the general dropsy. In Dr. Bright's analysis of 100 fatal cases, there was absence of heart disease in 27 cases; hypertrophy, without valvular lesions, in 18 cases; valvular lesions, without hypertrophy, in 3 cases.* The liver was healthy in 40 cases; slight deviation from the normal appearance, consisting in a mottled color, in 32; confirmed disease in 18 cases. The spleen and pancreas were healthy in all the cases.

3. The occurrence of *chronic rheumatism* in connection with Bright's disease is supposed by Dr. Christison to be sufficiently frequent to show some pathological relation between the two affections. The rheumatic or gouty diathesis is supposed by some to favor the development of Bright's disease.† Dr. Christison has observed a neuralgic variety of rheumatism oftenest associated.

Irritation or inflammation of the calyces, infundibula, pelvis, ureters, and bladder—more or less—is associated, in certain cases, with Bright's disease, attributable to the action of the altered urine on the mucous membrane lining these passages. (*Johnson.*) These local complications account for certain symptoms, viz: frequency of micturition, pain, and uneasiness. These symptoms are by no means uniformly present. They are more common according to Christison, than is generally considered by other observers.

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* Dr. B. probably did not recognize a distinction between hypertrophy and dilatation.

† Barlow, op. cit.

SYMPTOMATOLOGY.—The symptoms of Bright's disease may be divided into—1. Those due to the kidney affection, or to the conditions which are intrinsically involved therein; 2. Those incident to secondary affections, such as pleuritis, pericarditis, etc. The former chiefly claim attention in this article.

1. *Symptoms referable to the Urinary Apparatus and the Urine.*—Patients affected with Bright's disease sometimes complain of more or less pain, uneasiness, or a sense of weight in the loins. But these symptoms are rarely prominent. Severe pain or distress, referable to the urinary apparatus, does not belong to the clinical history of the disease. These local symptoms are often absent, and still oftener so slight as not to be much noticed by the patient.

Christison thinks that frequent micturition, and other evidences of irritability of the bladder, are quite common, and that the commencement of the disease may often be ascertained by inquiries directed to these symptoms in obtaining the previous history. Other observers, however, have found these symptoms rarely present; but this may, perhaps, be owing to want of care in making observations. Dr. Geo. Johnson states that frequent micturition, especially at night, is quite constant, and often precedes any other symptoms of renal disease. He attributes it to the local action of modified urine. Albuminous urine is not, as such, irritating, but the presence of albumen may induce chemical changes which occasion irritation.

The most characteristic symptomatic characters pertain to the urine.

a. *Presence of Albumen.*—We have already seen that this is due to serous transudation through the Malpighian tufts. But albumen in the urine may be derived in other modes. In hæmaturia, whatever may be the source of hemorrhage, the urine is, of course, albuminous. Pus, from cystitis or pyelitis, also renders the urine albuminous. It is, however, easy to exclude these affections.

Now, how far is albuminuria, proceeding from serous transudation into the renal tubes, significant of Bright's disease? When Bright's discovery was made, it was supposed that this symptom was pathognomonic. Observations since that time have shown it to be otherwise. The urine is found to contain albumen in a great variety of affections other than disease of the kidney. It has been found in the urine of a healthy, vigorous young man, by F. Simon. M. Blot, of Paris, found it in 41 of 205 cases of pregnant females. It existed in 4 of 6 cases of erysipelas observed by Dr. Begbie. Dr. Martin Solon found it in 22 of 23 cases of scarlatina. It has also been found, by different observers, in cholera, variola, pneumonia, acute pleurisy and pericarditis, in typhus and typhoid fevers, in intermittents, in chlorosis, cancer, peritonitis, and chronic catarrh.*

These facts do not impair the value of albuminuria as a symptom of Bright's disease so much as might, at first view, be imagined, because, in these various affections, *the albumen is found to be of transient occurrence, and comparatively small in amount.* On the other hand, Bright's disease may exist in a marked degree, and the urine be free from albumen. This is most apt to be the case when the disorganization is far advanced—in atrophous kidney. Such instances, however, are exceptional. As a rule, albumen is constant and more or less abundant during the progress of the disease.

The modes of testing the urine for albumen are doubtless sufficiently familiar to our readers. The liabilities to error, if either nitric acid or heat be exclusively relied on, are to be kept in mind. Crystals of uric acid may be thrown down by the addition of nitric acid in such abundance as to present somewhat the gross appearance of coagulated albumen; and a similar effect on the phosphates may be produced by heat, if the urine be alkaline. Both tests are therefore to be employed.

The alteration in physical characters of the urine, by the presence of albumen, is somewhat characteristic. In acute cases, it sometimes contains hæmatine, and even red corpuscles. This gives to it a dark, smoky appearance, as if a little soot had been stirred up in it. (*Barlow.*) In chronic cases, the urine is usually pale. It may or may not deposit a sediment. The presence of the albumen makes it *frothy* when agitated.

The presence of albumen is less important, pathologically, than other morbid alterations, consisting in the absence of the normal solid constituents, urea and other salts. The absence or deficiency of these ingredients is shown by the diminished density of the urine, notwithstanding the addition of the new element, albumen. The sp. gr. falls from 1.018 or 1.020, the normal average, to 1.010, or even lower. The quantity of urine varies. It is, of course, important to ascertain the quantity in connection with the density, in order to determine whether the solids are diminished, and to what extent. The quantity is very rarely but occasionally increased. In chronic cases, it is more or less diminished, and is frequently greatly reduced. Suppression sometimes occurs. The tables for determining from the density, as given by the urinometer, the amount of solid constituents per ounce, are very useful. These may be found in most works which treat of urinary affections.

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* *Vide* Review of "Albumen in the Urine in Various Diseases, by Dr. F. Heller, of Vienna," Brit. and For. Med.-Chir. Rev., July, 1853; and Robin and Verdeil, Chimie Anatomique, vol. iii. p. 314.

In proportion to the diminution of the solid constituents in a given period, is the extent to which the disease of the kidney compromises its excretory function; and there is probably greater danger from the retention of urea in the blood, than from the draining of albumen. Hence, examinations of the urine, with reference to the amount of solid constituents, are of greater importance than with regard to albuminuria. Dr. Christison, who was the first to indicate this point, has found the total amount of solids excreted during the day reduced to one-fifth and even one-twelfth below the normal average.

Microscopical Appearances of the Urine.—These are interesting and important. Dr. Geo. Johnson attaches great significance to them, basing upon them the diagnostic criteria of his several varieties of the disease.

The most characteristic of the appearances are certain cylindrical bodies which are moulded in the convoluted renal tubes, retaining more or less of the form and size of the latter. They are, in fact, casts of the tubes. They were first noticed by several observers at about the same time, viz: in 1843, by Simon; in the same year, by Vogel; and in 1844, by Henle. They were noticed by these observers independently of each other. (*Johnson.*) They require a magnifying power of about 200 diameters. They are found in the sediment of the urine, and may be buried in other sedimentary matters, so that to discover them requires some time and patience. As described by Johnson, these cases are of several kinds, as follows: 1. "Epithelial casts." These consist of coagulated fibrin, presenting on their surface *renal epithelial cells*, and sometimes of blood-corpuscles. Their average diameter is $\frac{1}{700}$ of an inch. Dr. Johnson regards these casts as diagnostic of "acute desquamative nephritis." He thinks the point of departure of the local affection is in the epithelial cells of the renal tubes, and that these cells are constantly shed, like the epidermis of the skin in desquamation. Hence the title just mentioned. Frericks regards the exudation of fibrin as the point of departure, and supposes that the epithelial cells become mechanically entangled in the fibrin, and are torn off.

2. A second variety Dr. Johnson terms *granular casts.* The granulated aspect which constitutes the distinctive character of these he

attributes to "disintegrated epithelium." This kind of cast he supposes to be significant of "chronic desquamative nephritis."

3. A third variety he calls *large waxy casts,* having a white, waxy appearance, with a well-defined sharp outline. Their diameter is 1-500th of an inch. This is nearly equal to the diameter of the renal tubes. Hence, Dr. Johnson infers *that they are moulded in tubes denuded of their epithelium by desquamation.* They are found, in small numbers, in cases of chronic desquamative nephritis. When abundant, they are considered as indicating a variety of the disease distinguished by the title of "waxy degeneration of the kidneys."

According to Dr. Johnson's views, the *large waxy casts* denote a more serious form of disease than either the *epithelial* or *granular casts.* They show that the tubes are deprived of their epithelium, and if this condition be general or extensively diffused, the excretory function of the kidney, which depends on the epithelium of the renal tubes, is seriously impaired or lost.

4. *Small Waxy Casts.*—The diameter of these is about 1-1000th of an inch. They are nearly free from epithelial cells and blood-corpuscles, and are due to exuded coagulated fibrin without desquamation. The calibre of the tubes in which they are moulded being small, owing to the presence of the epithelial cells—in fact, being of the natural calibre of the tubes when they are lined with epithelium. The *small* waxy casts thus denote a less serious morbid condition of the kidney than the *large,* because the secreting epithelium is not lost.

5. *Oily Casts.*—These are small waxy casts containing globular or oval cells which inclose a variable number of oil globules. The oil globules, some within and others without the epithelial cells, denote fatty degeneration; a distinct variety of kidney affection, according to Dr. Johnson, but a variety into which the other forms of the disease may merge. This variety is, however, most apt to follow non-desquamative disease.

An abundance of oily casts denotes the most serious form of disease; a form which, as Dr. Johnson remarks, is as fatal as tubercular consumption.

In addition to casts, the sediment of the urine is found under the microscope to contain urate of ammonia in some cases; uric acid crystals; renal epithelium in more or less abundance, which is always evidence of disease, pavement-epithelium being alone found in healthy urine; irregularly shaped masses of fibrin entangling epithelial cells and sometimes (in the acute cases) blood-corpuscles.

Symptoms referable to a Morbid Condition of the Blood.—These will be understood by referring to the blood-changes already mentioned, and, in fact, they have been stated already in connection with these changes. Recapitulated, they are as follows:—

1. Pallor due to anæmia.

2. Œdema, anasarca, dropsy of serous centres due, probably, mainly to deficiency of albumen in the blood-serum.

3. The pulse small and feeble; usually not accelerated in chronic cases, but more or less so in the acute form of the disease.

4. Neuralgic pains, cramps, convulsions, coma, etc., attributed to accumulation of urea and its metamorphoses.

5. Vomiting and diarrhœa from vicarious efforts to eliminate urea or the products of its metamorphoses.

6. The symptoms incident to the various secondary and associated affections not included in the foregoing list, viz., œdematous effusion beneath the bronchial mucous membrane, œdema of the lungs, of the glottis, serous inflammations, etc.

7. In chronic cases, *gradual diminution in muscular power, and the vital forces generally.* If not destroyed by some secondary affection, such as inflammation or coma, the patient dies with the symptoms of asthenia.

PATHOLOGICAL CHARACTER.—The nature of Bright's disease cannot be considered as ascertained; but, in this respect, it by no means holds a peculiar position. Is it primarily and essentially a renal, *i. e.*, a local affection? We may logically infer that it is not, but that it involves a blood-crasis. This is the doctrine now held by the best pathologists. The nature of the crasis is yet to be determined. The fact of its existence is alone settled, and this not demonstratively but inferentially. The same remark, however, is not less applicable to other affections which involve crases of the blood, *e. g.*, tuberculosis. Dr. Johnson attributes the several varieties of the disease which he describes, to the presence of certain morbid matters in the blood which the kidneys endeavor to eliminate. In the desquamative varieties, he thinks that the eliminative action within the renal tubes gives rise to inflammation in that situation and shedding of the epithelium. In the non-desquamative species, the local eliminative acts are incomplete. He compares these cases to cases of scarlet fever or smallpox, in which the peculiar eliminative actions on the cutaneous surface are wanting, *i. e.*, without the eruption. This view, although ingenious and plausible, must be considered as hypothetical. Dr. Barlow compares the desquamative varieties to bronchitis. He says, the affection is a bronchitis of the renal tubes. There is little ground for such an analogy.

That the disease involves prior blood-changes is shown by a consideration which I do not recollect to have seen referred to for this purpose. *It is one of the symmetrical diseases.* This is a fact not as yet mentioned. Both kidneys are affected, if not invariably, certainly as a rule, although generally one kidney more than the other. We are warranted in assuming it to be a law in pathology that symmetrical diseases involve blood-changes, although the latter are not demonstrable.

We are able to trace many, and, indeed, most of the phenomena of the disease to the immediate consequences of the kidney affection, viz., to the draining of the blood of its serum, and the retention in the blood of matters which should be excreted by the kidneys. So far, the pathology of the disease is tolerably intelligible. But the pathological relations of the abnormal conditions of the kidney to anterior morbid conditions are not ascertained. The same obscurity, however, as already remarked, hangs over the dependency of most local affections, not traumatic, on prior blood-changes determining their character and localization.

The propriety of dividing the disease into several varieties, clinically considered, is questionable. The relations of different symptoms to the various anatomical characters are not satisfactorily ascertained. It is, however, a valid distinction to recognize an *acute* and a *chronic* form. Moreover, certain pathological facts pertaining to the condition of the renal tubes may be ascertained by microscopical examination of the urine, viz., whether there are casts, and of what size and kind. Important inferences which have been stated may be drawn from these facts, but the divisions made by Dr. Johnson are of doubtful propriety.

ETIOLOGY.—It is rarely the case that our knowledge of the essential causes of diseases exceeds that of their intimate pathological character. We have just seen the deficiency of the latter as respects Bright's disease, and we are thus led to anticipate a corresponding deficiency with regard to the former.

Of the remote and predisposing causes we know something from the results of clinical observation.

1. Acute albuminuria is oftener observed as a sequel of scarlatina than in any other connection, becoming developed, generally, within a fortnight from the date of this convalescence. Œdema of the lower extremities and face, dropsical effusion into the peritoneal, and, perhaps, pleural cavities occur rather abruptly. There is a liability to effusion into the arachnoid cavity. An instance of sudden death, pro-

bably due to this occurrence, has fallen under my observation. The foregoing symptoms are associated with scanty, smoky, bloody urine, loaded with albumen. These cases are attended by more or less febrile movement, and hence they have been called cases of "inflammatory dropsy." Other symptoms are loss of appetite, peevishness, and debility. These cases rarely eventuate in a chronic kidney affection; in other words, in confirmed Bright's disease. Serious consecutive affections are rare, and relief in the vast majority of cases follows judicious management.

2. It occurs in connection with the gouty diathesis. In this connection it may be presented in either the acute or chronic form. The disease is less frequently observed in this connection in this country than in Europe, owing to gout being less prevalent.

3. Intemperance and the habitual use of alcoholic and vinous stimulants, undoubtedly, are predisposing, if not determining causes, especially of the chronic form of the disease. It prevails to a much greater extent among those addicted to drinking than among the temperate. It may, indeed, be said to be peculiarly a disease of drunkards.

4. It follows exposure to cold. Christison states that he has often observed it to be developed after the exposure of lying out of doors during the night, in a state of intoxication, on the damp ground. Exposure and intemperance are here combined. It occurs especially among the poorer classes of society who are more exposed to the action of cold.

5. It has been observed to succeed erysipelas. Dr. Johnson cites illustrations of this connection.

6. Probably disease of the heart predisposes to it. It is, however, a matter of question whether the relation be one of cause, effect, or concomitancy.

7. As regards age, it is oftenest met with in adults between the two extremes of life. It is very rare in advanced age. It occurs in children, and even in newly-born infants. (*Valleix and Grisolle.*)

8. Males are much oftener affected than females. It is doubtful how far this fact shows an influence intrinsically belonging to sex, because certain of the predisposing and exciting causes are incident to the habits of males rather than females, viz: intemperance and exposure.

DIAGNOSIS.—As an acute affection, Bright's disease, in the great majority of cases, is declared by the occurrence of general dropsy appearing more or less abruptly, together with albuminuria. The sediment of the urine, examined microscopically, is found to contain epithelial casts, with loose epithelial cells, having the characters of those which belong to the convoluted tubes. These phenomena generally follow scarlatina, or they are associated with gout, or they succeed either a debauch or exposure to cold, or both conjoined. The urine is scanty, high-colored, smoky, and not unfrequently bloody. Blood-casts are sometimes observed; Johnson states that the latter are distinguished by their yellow color. Hematuria, caused by escape of blood from the Malpighian tufts, is distinguished from hemorrhage taking place from other portions of the urinary apparatus *by the presence of blood-casts moulded in the renal tubes.*

Serous inflammations, convulsions, and coma, may occur in acute cases, and a fatal result be induced by either of these secondary affections. Recovery, however, may frequently, if not generally, be expected. The affection is liable to eventuate in a chronic form of the disease.

The acute affection is much less frequent than the chronic. In the great majority of cases the disease is subacute *ab initio*—in other words, essentially chronic.

As a chronic affection, its development is remarkably slow and insidious. After a variable period of indefinite ill health, the occurrence of œdema is usually the first event to excite alarm. It is under these circumstances that cases first come under the observation of the physician. Œdema of the lower extremities or face, or of both, with an anæmic complexion, are the external characters. Then it is ascertained that for weeks or months there have been more or less debility, loss of appetite, various dyspeptic ailments, &c. Notwithstanding these symptoms, patients may continue active or laborious occupations till general dropsy obliges them to give up. I have met with instances of persons continuing to labor until at length being compelled to seek hospital relief, they were no longer able even to sit up, but took at once to the bed, never to rise from it. The urine, in the vast proportion of such cases, is albuminous. The diagnosis is not positive without this symptom. It may be absent temporarily, and hence examinations of the urine should be repeated, if it be not found when first tested. The urine may also be found to contain "granular casts" (composed of withered, disintegrated epithelium), or "large waxy casts," or "small waxy casts," or "oily casts," as described by Dr. Johnson. The significance of these different kinds of casts, as pointed out by the author just named, is to be borne in mind. The "epithelial casts" belong especially to acute cases; "granular casts" denote a chronic affection. "Large waxy casts" indicate absence of epithelium, and therefore a more advanced and serious form of disease. "Small waxy casts" are less ominous, because the renal tubes are not denuded of their epithelium. "Oily casts" in abundance are a sign of fatty degeneration and the most hopeless condition. The disappearance of casts, the urine containing albumen, or the disease evidently existing, shows probable atrophy from wasting and obliteration of the tubes. Urea, and the solid constituents of the urine, are more or less diminished, shown by diminished density. Generally, the quantity of urine is lessened, but, exceptionally, it may be increased.

In cases presenting the phenomena and previous history just stated, there is no difficulty in arriving at a diagnosis, provided the practitioner be acquainted with the distinctive characters of the disease.

But the disease may be presented under circumstances in which recognition is not so easy. Œdema or anasarca may be slight or wanting, and it may be carelessly attributed to other causes than renal disease. *Moreover, we are called to cases in which certain of the secondary affections of Bright's disease give rise to the prominent symptoms, and our attention may be concentrated on these, the pathological condition of the kidney being overlooked.* This was, of course, habitually done before Bright's discovery. It is still done not unfrequently, owing to many practitioners being but little acquainted with Bright's disease.

A person may have pleuritis or pericarditis, for example, and nothing beyond this be suspected, when the serous inflammation is dependent on disease of the kidney. In all cases of serous inflammations especially, we are to look for kidney disease in the previous history, the concomitant symptoms, and particularly the results of examinations of the urine. The same remark is applicable, although to a less extent, to pneumonitis, to chronic bronchitis, and œdema of the lungs.

Obstinate vomiting and purging may appear to comprise all the phenomena of the disease. This may lead to exhaustion and fatal collapse, like cholera. Some years ago I reported a case of this description in which Bright's disease was not suspected till after death. The autopsy showed very great disorganization of the kidneys. This patient entered the hospital with obstinate vomiting. She was intemperate, and had continued to work as a washerwoman till a short time before her admission. She declared that she had suppression of urine, but she was not believed, and the actual condition in this regard was not investigated. There was no œdema; she suddenly fell into coma and died. The case came under my observation, and I must appropriate the censure implied in the above statement.

Coma, convulsions, epilepsy, neuralgia, may be due to Bright's disease when they seem, without proper investigation, to constitute the sole appreciable maladies.

It is an important practical fact, not to be lost sight of, that Bright's disease may exist without the patient being aware that he has any serious malady, and, indeed, any malady whatever, and suddenly he is attacked with some one of the consecutive affections which have been enumerated. It is thus sufficiently evident that the disease will frequently not be discerned if its pathological associations are not borne in mind.

PROGNOSIS.—In the acute form, as already stated, the disease in general ends favorably; but it is liable to become a chronic affection which will prove fatal.

In the chronic form it is a very grave affection. In the vast proportion of cases, sooner or later, it ends fatally, directly or indirectly. The albuminuria and other phenomena may disappear for a time, recovery appearing to take place, and again reappear. This fact was illustrated in the case of the late Professor Swett.

The duration of the disease is very variable, extending over months and years. Its march toward a fatal issue is generally slow.

The mode of death is not uniform. It may take place, after great exhaustion, by asthenia, the pulse becoming more and more feeble, and the intellect remaining intact up to the last moments. In other cases, convulsions and coma occur, which end fatally. Serous inflammations, œdema of the glottis, or other consecutive affections may prove the immediate cause of death.

With reference to the prognosis, it is to be borne in mind that diminution in the solid constituents of the urine is more unfavorable than the presence of albumen in ever so much abundance. A scanty quantity of urine and very low density show extensive disease, and, probably considerable disorganization. The prognosis is rendered still more unfavorable, under these circumstances, by the absence of cysts in the urine.

TREATMENT.—The acute form of Bright's disease being regarded by some pathologists as an inflammatory affection, the measures known as antiphlogistic have been considered as indicated. General bloodletting, under these circumstances, has been recommended. But, whatever may be the local pathological condition, detraction of blood by venesection must be regarded as a measure of doubtful propriety. Bleeding promotes a blood-lésion incident to the disease, on which certain of its pathological consequences depend, viz., diminution of the red-corpuscles or anæmia. Rationally considered, to practice blood-letting, in view of the fact just stated, is inconsistent; nor have we conclusive evidence in its favor derived from the results of experience.

Local depletion is more admissible; but its apparent usefulness, in some instances, may be explicable on the principle of revulsion. The late Professor Swett assured the writer that, in his own case, the albumen disappeared from the urine directly after local bloodletting, by cupping over the loins, had been employed.

Post-mortem examinations after acute attacks of the disease show more or less hyperæmia of the kidneys. It is a rational indication to endeavor to relieve this condition by revulsive measures. Remedies which exert a special exciting or irritant action on the kidneys, such as cantharides and turpentine, in view of this condition, are to be avoided. Diuretics of all kinds are of doubtful propriety in the acute form; although, as will be seen presently, it may be otherwise when the disease is chronic. The objection to their use is the determination of blood to the organs which they are likely to occasion in proportion to the increased functional activity to which they give rise.

Hydragogue cathartics are indicated to get rid of dropsical effusions, and to eliminate from the blood retained urinary principles.

The functions of the skin are to be excited by the tepid bath, the hot-air bath (Dr. G. Johnson gives a decided preference to the latter), and by diaphoretics. Dr. Osborne attaches great importance to diaphoretics in all forms of the disease. The functions of the skin and kidneys being to some extent, as regards each other, supplementary, the object is to relieve the kidney of a portion of the burthen of elimination.

Coma and convulsions indicate purgatives and diaphoretic remedies to eliminate retained urinary principles, which, either directly, or more probably by means of their metamorphoses, produce topical effects on the nervous centres. Revulsion, and, in plethoric subjects, bloodletting may be called for in case of these accidents.

Consecutive inflammations of serous and other structures, claim, in addition to appropriate treatment directed to them, measures to promote elimination of retained urinary principles, which, probably, constitute either the exciting or predisposing cause of the local inflammation. Johnson enforces the importance of abstaining from the use of mercury in the treatment of local inflammations occurring in connection with Bright's disease, inasmuch as this therapeutical agent has been by many supposed to predispose to the production of disease of the kidney.

Improvement is shown by an increased flow of urine; disappearance of blood and albumen; resumption of its normal appearance; and, at the same time, corresponding diminution and, finally, disappearance of dropsy, together with the return of appetite, strength, etc.

Tonics may be useful during and after convalescence; and great care in diet, the use of stimulants, exposure, etc., are to be enjoined.

In the chronic form, antiphlogistic measures are contraindicated certainly not less than in tuberculosis. The same remark will apply to the use of mercury. Moderate counter-irritation over the loins may be useful.

The therapeutical indications in this form are derived from several sources.

It is generally an indication to relieve dropsical effusion. This in itself gives rise to inconvenience and, it may be, to serious evils; for instance, erysipelas of the extremities, difficulty of respiration, etc. Shall diuretics be resorted to in order to fulfil this indication? The preponderance of opinion is probably on the negative. The local action of diuretics is supposed to be injurious. Some, however, think otherwise. For example, Professor Bennett, of Edinburgh, regards these remedies as positively useful by aiding in washing away the casts which obstruct the renal tubes.* This is a rational view of their useful operation. More or less of the disorder of the kidney is, doubtless, due to the mechanical obstruction of these tubes, and the pressure on the intertubular veins. It is an object, therefore, to get rid of these casts. They are expelled by an accumulation of liquid behind them, and in this way only. It is, however, often difficult to effect an increased secretion of urine in this disease, and for this reason diuretics prove of no avail. The state of the stomach and bowels frequently interferes with the action of diuretics. They act as laxatives. Under these circumstances, their external application may be tried after the plan proposed by Christison, viz., an infusion of digitalis ℥j, in water ℥xx, applied to the abdomen by cloths soaked in it, or by the *spongio-piline*. I have known this mode of application to be followed by copious diuresis, and complete disappearance of the dropsy. A liniment of tincture of digitalis, iodine, and squill rubbed over the abdomen and limbs, will, in some instances, increase notably the quantity of urine. If continued, however, it soon excites irritation and soreness of the skin.

If diuretics are not advisable, or prove ineffectual, hydragogue cathartics may be employed to relieve dropsy, and also to eliminate urinary principles. The best article is elaterium, given in doses of one-fourth of a grain, repeated every one or two hours till the desired effect is procured. Gamboge is recommended, also jalap and the bitartrate of potash, by Dr. Bright and others.

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* Memorandum of a conversation in the Edinburgh Royal Infirmary.

Diaphoretics are useful, such as Dover's powder, and small doses of antimony. The hot-air bath may be resorted to.

Coexisting disorders will, of course, claim attention. Inflammations, as justly remarked by Johnson, require less antiphlogistic measures than when developed under other conditions, and mercury is inadmissible.

One of the most important objects in the management is to remove the causes which have originated, and which tend to perpetuate the disease. The habitual use of stimulants is to be interdicted, unless, in consequence of long habit, it is dangerous to withdraw them entirely; if so, the quantity is to be diminished. The diet of the patient should be simple, digestible, but nutritious. Pastry is especially to be avoided, for it has been found to induce temporary albuminuria in healthy persons. Fatty articles are contraindicated, as favoring fatty degeneration. Attention to diet is especially important when the disease is associated with a gouty diathesis.

Exposure to cold, and over-exertion, are to be avoided. Poor persons, who are unable to live without labor involving more or less fatigue and exposure, will be benefited by a sojourn in a hospital. The disease is managed better in hospitals than in dispensary practice. Exercise in the open air, however, is by no means to be interdicted, if strength and circumstances permit. On the contrary, it is to be enjoined, under proper restrictions. Travelling, especially long sea-voyages, have been found to be highly useful. Some striking illustrations of the efficacy of the latter are cited in Johnson's treatise.

Warmth of the external surface is highly important. Flannel, silk, or chamois leather should be worn next the skin, and a sufficiency of other clothing.

Tonics are called for by the weakness of the digestive function, and general debility. Ferruginous preparations, especially, are indicated by the state of anæmia.

Astringent remedies are supposed to diminish the draining away of albumen through the kidneys. Gallic acid has been thought to be useful in this way. It is strongly recommended by Johnson and Golding Bird. The acetate of lead has also been used for the same purpose.

In so far as disorganization of the kidneys has taken place, restoration is, of course, impossible—quite as much so as in tuberculosis. But a considerable portion of the secreting portion of these organs may be lost, and the remainder suffice for the wants of the economy. Nature has here been as bountiful, as in providing a superfluity of lung. If, therefore, the disease can be arrested in its progress, even after it has done considerable damage, life and tolerable health may be preserved for an indefinite period. Cases which present a formidable aspect are not by any means to be considered hopeless. The management, as has been seen, does not embrace special medication, but, in addition to remedies for particular symptoms and consecutive affections, *removal of causes and regulation of hygiene.* The object is not to effect the recovery from the damage that has been done, but to prevent further injury. Albuminuria may continue, and patients have comfortable health for many years. Immunity from the consecutive affections, to which the patient is constantly liable, is a grand object to be regarded. Great care is to be observed to avoid exciting causes which may determine the occurrence of these affections.

The advantage of an early diagnosis is very great in this disease. The same consideration is applicable here as in pulmonary tuberculosis, viz: inasmuch as everything is to be hoped for from *arrest* and *prevention*, the sooner the affection is ascertained, the less will be the amount of injury done before the progress of the disease is stayed. With reference to an early diagnosis, it is desirable, in all cases in which there is room for suspicion, to examine the urine, not once merely, but repeatedly. For the same end, it is much to be desired that the attention of practitioners generally be more turned to this disease than has been the case hitherto.

In the remark just made is involved a reason why Bright's disease was selected as the subject of the present memoir; and the writer would add that, in making the selection, he was guided by a suggestion to that effect from the senior editor of this journal.

BUFFALO, *Sept.*, 1856.

ART. II.—*Case of Gunshot Wound of the Brachial Artery, treated by Compression.* By W. F. EDGAR, M. D., Assistant Surgeon U. S. A. (Reported to the Surgeon-General.)

SIR: The following case appearing to possess some points of unusual interest, it has been deemed worthy of a report in detail:—

Private B., of Company L, 1st Artillery, being on duty with a mounted detachment operating in the Big Cypress, whilst at Fort

Simon Drum, on the morning of the 3d of May, accidentally shot himself in the left arm with a large-sized Colt's revolver. The ball entered the middle of the internal side of the arm, at about three inches above the internal condyle of the humerus, and, passing over the anterior aspect of the bone, made its exit at a point nearly opposite. Assistant Surgeon R. F. Simpson, who was on duty at the post at the time, says: "I saw the wound immediately, and found florid blood spirting from it in jets. Supposing the brachial artery to have been wounded, I placed my fingers over it for a few minutes, when the hemorrhage ceased. I then dressed the wound with a compress and bandage, and directed the application of cold water; at the same time, I noticed the *absence of the pulse* at the wrist of the wounded arm." The patient having been the subject of mental aberration since he has been known in the service, and appearing to suffer exacerbations, as it were, at times, tore the dressing from off his wound twice during the day, but did not induce a return of the hemorrhage. After the third dressing it was not disturbed again; but on the evening of the 6th he made his escape from the fort, and walked fifteen miles during the night, through the Indian country, to the camp of his company; but still there was no hemorrhage, and the wound did well. On the 20th of May he returned to this post with his company, and I took him into the hospital. The wound in the arm had nearly cicatrized, he only complaining of some stiffness from contraction at the bend of the elbow. At the end of a week or so, the wound having entirely cicatrized, I sent him to his quarters. On the evening of June 12, he bought a pistol at the sutler's—a five-inch Colt's revolver—and on the morning of the 13th, immediately after breakfast, and in the company's quarters—having, perhaps, an exacerbation of his hallucinations—drew his pistol, which he had previously loaded, and fired promiscuously at two of the men in the quarters, without effect. He then drew on the Orderly Sergeant, who, speaking to him coolly, asked what he wanted to shoot him for. He replied: "Then I'll shoot myself;" and, suiting the action to the word, did so, putting the muzzle of the pistol against his left side. The result not proving immediately fatal, he was taken to the hospital, where he ejected a large quantity of ingesta from the stomach, accompanied by a few ounces of blood. He manifested a great deal of strength and mental excitement, and his pulse, only to be found at the right wrist, was a little depressed. He was put to bed, and cold cloths applied to the chest and abdomen, and a little solution of sulph. morph. administered, under which he became quiet, and remained so during the day, occasionally taking a little cold water or cold tea; his pulse rose to nearly the natural standard, and, with a little more sol. morph., he slept and passed a quiet night. In the morning (Saturday), I found him doing well; he complained of some soreness in the region of the wound; voided urine once or twice during the day; had a small motion of the bowels in the evening; asked for and took a little weak broth; took a ¼ gr. sulph. morph. at bedtime, and continued quiet and comfortable till 3 o'clock on Sunday morning, when he began to complain of pain in the abdomen. Fomentations were applied; at 6 o'clock, he had some tympanitis and hiccough, a small, thready pulse, and a sunken and anxious countenance; a few drops of sol. morph. allayed the hiccough; complained of sensation of hunger, and continued to sink until 12 o'clock, when he suddenly expired.

Being anxious to see the result of his injuries, especially the original one of the arm, Assistant Surgeon John Moore and myself, on Monday morning, proceeded to make an examination *post-mortem.*

The brachial artery being cut down upon and dissected out from the axilla to its bifurcation at the elbow, was found incorporated with and firmly bound down to the bone, by the injured and contracted mass of muscular tissue in the original track of the ball; two-thirds of its circumference had been carried away by the ball for three-fourths of an inch of its length, then for the distance of half an inch above and below this contraction it was slightly enlarged, solid, and cord-like. On opening the chest and abdomen, we found little or no signs of inflammation, but considerable effusion of blood in both; and that the ball, entering the body between the cartilages of the last true and first false ribs, about 2½ inches from the point of the ensiform cartilage, had passed through the stomach at its junction with the œsophagus, through the diaphragm, inferior anterior edge of the left lung, apex of the heart, cutting within a line of the interior of the right ventricle, and into the right lung.

That an artery, the size and situation of the brachial, should, after the receipt of such an injury, be attended by so favorable a result, without ligation, or more compression than was made, is not, I believe, a common occurrence; and that an individual, after such lesions, especially of the stomach and heart, should live for forty-eight hours, without manifesting more untoward symptoms than followed the fatal injury, is also worthy of remark.

ART. III.—*A Case of Empyema.* By W. C. SNEED, M. D., of Frankfort, Ky.

IT has happened to me, in a practice of medicine and surgery of sixteen years, to meet with only two cases of the disease technically termed *Empyema.* The first of these occurred twelve or thirteen years since, and was reported at considerable length in the *Western Journal of Medicine.* The subject of the disease was a youth some twelve or thirteen years old; the condition resulting from a violent attack of pleuro-pneumonia. I allude to the case again, as a matter of interest, to state that the recovery was perfect, the subject being now a grown man, and enjoying robust health. The diseased side is now much smaller than the opposite. He pursues an active life, and feels no inconvenience from the diminished size of the affected lung.

The favorable termination of this case depended, in a measure, upon the age of the subject and the vigor of his constitution. The surgical operation contributed much, doubtless, to aid in his recovery, and should be regarded as an evidence of the propriety of an early resort to proper treatment.

The second case occurred three years since, the termination being equally favorable, though the case was one of much more gravity and attended with more difficulty than the former.

I shall not go into the minutiæ of the history of this case as fully as of the former, but will present enough to illustrate all the important points involved.

Mr. A., aged fifty years, nearly six feet high, weight one hundred and ninety pounds, of sanguine temperament; form full, rounded, and inclined to obesity, and plethoric to a considerable extent; was attacked on the 4th of April, 1853, with an acute pleuritic pain, increased, as such pains usually are, by cough, pressure, full inspiration, and lying on the affected side; his countenance indicated the most intense suffering, and he was forced to arise from his bed, and either stand or be supported for fifteen or twenty minutes at a time. The respiration during the violence of his suffering was performed by the unaffected side, and was greatly embarrassed.

It was no easy matter, at first, to determine the exact locality of the affection. The thorax was large, and the pain was so low down as to make it difficult to determine whether the disease was in the thorax or in the serous tissues of the abdomen. In ordinary attacks of pleuritis, the pain is usually referred to a point near the mammary gland, and is felt in a limited space no matter what may be the extent of the inflammation. This is a simple elementary fact, not easily explained, though depending, in all probability, upon the greater mobility of the thorax at this point, and also its being about a medium distance from the sternum and spine. The pain may be felt at other points in the side, and even in the opposite side without its partaking of the inflammation. The suddenness of the attack and the absence for several hours of constitutional disturbance added still more to the difficulty of the diagnosis; the pulse remaining small, feeble, and very rapid; the skin cold, and a general sense of chilliness. There was no cough until the next day, when it was dry and characteristic of the disease.

He was bled freely at once, and had chloroform until he was made insensible to the pain. By the use of remedies his symptoms were considerably mitigated, though he continued to suffer the fixed unremitting pain in his side for several days. Fever, with delirium, set in on the second day and continued, varying in intensity, for the next several succeeding days, at the expiration of which time, by the officious interference of friends, additional medical aid was called in, and the case passed out of my hands.

About the 10th of August I was again requested to take charge of the case, which I consented to do, with the understanding that no further interference would be permitted.

The patient was now greatly emaciated, and presented an appearance little like that in which I left him. He was reduced to about ninety pounds; his countenance cadaveric; pulse small, feeble, and rapid. He was expectorating from a pint to a quart of muco-purulent matter per day; had hectic fever and night-sweats; was greatly distressed by the cough and suffering, and had abandoned all hope of recovery. I learned that after the case had passed out of my hands the symptoms continued to increase in severity for many days, and the disease assumed the form of chronic pneumonia.

The affected side still continued to be the seat of a dull heavy pain, with dulness on percussion throughout its whole extent, and evident enlargement. The cough was very harassing, and, with loss of appetite and sleep, the patient lost flesh rapidly, and soon became extremely prostrated.

It is reasonable to suppose that very soon after the case passed out of my hands, and as the more active symptoms subsided, purulent matter commenced forming in the pleural cavity, and gradually continued until discharged by a fistulous opening into the bronchial tubes, which occurred a month or six weeks before I was called to see him the second time. I learned from the patient that his side enlarged considerably, and that breathing was attended with difficulty and pain, until the opening occurred and the matter escaped into the bronchia and was discharged at the mouth. He assured me that he coughed up in less than twenty-four hours at least one gallon of purulent matter, which flowed so rapidly at times as to almost strangle him. After this discharge he had a comparative respite, which lasted for nearly a week, the side, in the mean time, after being reduced, gradually regained its former fulness, the cough continuing to harass him more or less all the time.

After the occurrences above related, he and his friends became more alarmed about his case, and sent to Lexington for Professors Bush and Dudley, who visited him several times, and decided that he had chronic empyema, but did not operate for his relief, supposing, no doubt, but that his condition was unfavorable for any operation. His breathing was difficult, as before stated; pulse 120 to 130 per minute; hectic fever with night-sweats, with bronchitic râles and gurgling in the right side, and very copious expectoration.

In this case, both the rational and physical symptoms clearly indicated a direct communication between the empyemic sac and some of the larger bronchial tubes. This was readily inferred from the fact that empyema existed beyond a doubt, the matter having been collecting for many weeks; its sudden and free discharge by the mouth, attended with such distressing paroxysms of coughing; and the enormous amount ejected. After the first rupture and discharge, regular fits of coughing occurred daily, and from a pint to a quart of matter would be thrown up.

The patient had now been ill about four months, during which time he had the full benefit of skilful medical treatment, and all the remedies known to our art except that of paracentesis thoracis. This being the last and only thing left for his trial, it was determined, after due deliberation, to give him the full benefit of such an operation. Considering his greatly reduced condition, great apprehension existed as to the permanent good to be derived from this means of relief; but, on the other hand, it was evident that the quantity of pus was not diminishing, and while it continued to form it would be discharged through the fistulous opening in the lungs, harassing the patient with cough, and wearing him down with fatigue. By the operation we hoped to change the mode of escape of the matter, and by the use of sedatives, tonics, and a generous diet, to enable his system to rally from its alarmingly reduced condition. These considerations, together with the known safety of the operation, determined the course to be pursued.

Having made known to the patient all the facts in his case, and candidly explained to him the hopes we had of giving him relief, he cheerfully submitted to the operation. Had it been performed when the existence of the deposit was first discovered, and when the pleural cavity was full, no difficulty would have been experienced in reaching the sac and giving free vent to the matter. But now that the matter had been thrown off through the bronchial tubes, and the diseased parts were lying in contact with each other, it was more difficult to determine the exact point at which to make the puncture. Guided by the metallic tinkling, and a general knowledge of the parts involved, an opening was made at the lower part of the chest, between the eighth and ninth ribs, about half way from the sternum to the spine, and an exploring needle carefully passed upwards and backwards into the pleural cavity. When it had been pushed in two or three inches, pus flowed freely, to the extreme alarm of the patient, but otherwise to us. The needle was withdrawn, and an ordinary sized trocar and canula passed into the sac, which discharged probably a half pint of pure, bland pus. The patient, at this stage of the operation, became unable to control his alarm, which, with a violent spasmodic contraction of the intercostal muscles, forced the instrument out, and compelled us to desist from any further effort to discharge the remaining contents of the sac.

Efforts were instituted to keep the opening from closing by adhesive inflammation, with the view of reintroducing the canula, for the purpose of keeping the sac drained. In this we were foiled, and, in the course of a few days, the instrument had to be reintroduced, which was done in such a manner as to make the opening more directly over the centre of the sac, and valvular in its direction. The first opening was made after the directions of the older surgeons: the skin being drawn up as far as practicable, an incision was made along the upper edge of the rib, and a bistoury or thumb-lancet thrust through the intercostal tissues and the pleura, into the cavity. In each of these operations, the instrument evidently came in contact with the pleural surface of the lung, but resulted in no serious consequences to that organ. This may be accounted for very readily, as the thickened condition of the pleura, then in a state of subacute inflammation, rendered it less easily injured, and less liable to take on active symptoms when penetrated by an instrument.

In order to facilitate the withdrawal of the pus from the cavity, we had made the instrument recommended by Dr. Bowditch, of Boston, and tried to use it in the management of the case. We tried it sufficiently to satisfy us of its utility, but, owing to the difficulty of introducing the catheter between the ribs, we were not able to accomplish as much by its use as spoken of by the distinguished Boston surgeon.

In the course of a week or two, ulcerative inflammation was set up in the last opening, and a communication established between the two, from within, which gave free vent to the matter. After this, the patient began gradually to improve, though the matter still continued to escape in very free quantities.

From the time he came under our care, he was put upon a very liberal diet, and given wine, porter, &c., in quantities to sustain his strength. Paroxysms of coughing would frequently occur, and when, by the closing or obstruction of the external orifice, the matter collected in the chest, he would cough up large quantities, and would be more or less harassed in getting it up.

In less than three months from the date of the operation, he was able to walk about, the opening in the side having closed, and the diseased lung expanded so as to occupy the entire cavity of its side. He had, in that time, almost gained his usual weight of flesh, and felt as well, he said, as he ever did, excepting occasionally a little pain in the diseased side.

Mr. A.'s health has been good ever since, and he is now weighing about 200 pounds, and looks as though he would reach the age allotted to the "oldest man."

FRANKFORT, *Aug.*, 1856.

P. S.—The first operation was performed in the presence of several of the physicians of our city, and we had the benefit of their aid and advice. My partner, Dr. Rodman, assisted me greatly in the management of the case.

ART. IV.—*On the Congenital Non-expansion of the Lungs. (Atelectasis.)* By G. A. KUNKLER, M. D., of Madison, Ia.

DURING January, 1855, I attended Mrs. J. T—— in her second confinement. The labor was rapid, and completed without any untoward circumstance. The child was large and well developed in every respect. It was noticed, however, that immediately after its birth, its movements were very feeble; the voice was hoarse and weak, more resembling a whine. The breath was very short, the child occasionally making convulsive gasps, and the thorax scarcely moving during the inspirations. The skin had a bluish cast. After being put to the breast, it would cease every few moments from suckling, to breathe. It was placed in a warm bath, and immediately some improvement took place; the skin became of a more natural color; the movements of the limbs less feeble; the voice louder, but the respiration remained as before. On taking it out of the bath all the previous symptoms reappeared. On percussion, and applying the ear, the lungs appeared to be acting only in small circumscribed regions; the signs resembling those that are observed in pneumonia after hepatization has taken place.

The symptoms during the day gradually became more aggravated; convulsions set in; the skin becoming bluish-purple and clammy, and the voice hoarse and croupy. These paroxysms lasted from two to five minutes, and generally returned whenever the child commenced to suckle, or was moved about a great deal.

Presuming that the symptoms were caused by a greater portion of the lungs having remained in the fœtal state, I adopted the treatment which I had found most effectual in two other cases which came under my observation, and which was most likely to make the cells of the lung accessible to the ingress of air. The child was placed in a warm bath, and friction freely applied over the whole surface. The thorax was next lifted above the surface of the water and sulphuric ether freely sprinkled over it and allowed to evaporate. The effect was rapid; the child made violent efforts to take deep inspirations, and commenced to scream with all its power. The voice became gradually more full and strong; the thorax expanding with every inspiration; the color of the skin becoming natural, and the movements of the limbs more energetic. Upon examining the lungs afterwards, the respiratory murmur was heard in every part. No further symptoms showed themselves, and the child has ever since enjoyed good health.

Remarks.—The above case I have considered a fair example of that peculiar lesion which, at various times, has been the cause of extensive controversies, some contending that the lesion is the consequence of pneumonic inflammation; others, that the deficient expansion is caused by an enlargement of the thymus gland, etc. The most complete, accurate, and learned treatise, one which, in my opinion, places the true nature of the lesion beyond all doubt, was published in 1832, by Edward Jörg,* a German physician, who, following out some views of his father which had been published, more closely investigated that particular condition of the lungs of new-born children found after death, in cases where the first act of breathing has been imperfectly accomplished, either because they were feeble, or had been born before placental respiration was altogether suspended, and before the necessity for pulmonary respiration had become sufficiently potent to stimulate all the muscles of respiration. The consequence is, that a larger or smaller portion of the lung remains in the state it existed in, in the fœtus. Among the special causes of this imperfect respiration, which, though various, nevertheless preserved the same features in all cases, Jörg enumerates the following:—

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* Ed. Jörg, de morbo pulmonum organico ex respiratione neonatorum imperfecta orto.—LIPSIA, 1832.

1. When the want of oxygen is feebly felt, and consequently only a feeble effort is made in respiring. This may occasionally take place when the delivery has been hurried and easy.

2. When the spinal cord or the brain has been injured by pressure or otherwise, during parturition, and consequently the nervous action of the respiratory organs is suppressed, or is more or less paralyzed.

3. When foreign bodies, such as blood, vaginal mucus, etc., have become introduced into the trachea, or the mouth and nostrils have been closed, or the abdomen and thorax have been compressed.

4. In cases of delivery in the open air, in stables, or other exposed places, where the child is subjected to the influence of sudden cold, and which causes a contraction of the bronchia.

If the first inspirations from any of the above-mentioned causes take place without force and superficially, the air does not penetrate all the cells of the lung, and consequently a portion remains intact, and in the condition in which it existed during intra-uterine life. Sometimes one-half of the lung, or more or less, may remain in this condition.

In making an autopsy of children who have died in consequence of this lesion, those portions of the lung which have remained in the fœtal state for several days after delivery, are readily distinguished by their color from those into which air has penetrated, and which are in constant use. In the former, it is dark brown, and has a compact appearance, while in the latter it presents the normal light red, or brick color, and a spongy appearance. Where the two parts border upon each other, the color draws a distinct line between them; the former possesses all the characteristics which it presents in the fœtus, and in structure resembles the liver or spleen; on cutting into it, no crepitation whatever can be perceived, and no air-bubbles arise when the cut portion is pressed under water. If these parts be separated carefully from those into which air has passed, and placed in water, they immediately sink. In infants which have died eight or ten days after birth from this defect, portions of the solid lung may be inflated through the bronchial tubes which lead to them. After having been inflated, the lung will have all the appearances of a normal one. Considerable effort, however, is required to inflate all the cells completely. Occasionally, it happens that empty cells are interspersed with inflated ones over the whole surface of the lung, in which case the latter has a variegated appearance, each part retaining its proper color. In this case, the tissue is more spongy and floats in water, though not upon the surface. Such a lung will only receive its natural color when all the cells are inflated with some force.

It is of the highest importance to know whether any portion of the lung remains in this condition, after being exposed to the current of air which is passing through the healthy portions for several hours or days, and when the child has strength enough and is compelled to make full inspirations. It appears that the ingress of fresh air into the previously opened and enlarged cells gradually compresses the empty ones more and more, and finally obliterates them completely. In the course of ten, twelve, or fifteen days these cells are converted without any inflammatory process whatever into a new substance, which has generally been mistaken for hepatized lung. The substance of a respirable lung may certainly become obliterated in consequence of inflammation, but the structure produced by this process differs materially from that which remains of the fœtal lung, the cells of which never have been distended with air. In the latter, we find neither the cells nor the vessels filled with the effused lymph. Its substance is less hard to the touch, and has a peculiar dark-red color. Above all, such lungs do not possess the normal size; and if we, therefore, find cases where the organs of respiration are too small and partially obliterated, we may suspect that imperfect respiration and organic closure of the air-cells, without inflammation, may have produced this defect.

The symptoms which manifest themselves differ somewhat according to the cause which has given rise to the defect. If the infant has been born too quick, it remains (after having commenced to take short and superficial inspirations immediately after being born, and has in no wise shown itself asphyctic), rather quiet and weak, moves the limbs very little, cries only rarely, and with a weak whining voice; evincing little desire and strength in suckling. During the short and superficial respirations the thorax scarcely moves. In the warm bath the movements of the limbs, and also the voice, become more active, the prostration becomes less, the color of the skin becoming more natural; but the breathing remains the same as before; and after the infant is removed from the bath a short time, all the former symptoms return more or less marked.

If pressure upon the brain or spinal cord (which may result during difficult labor, or from the use of instruments) has been the cause of the atelectasis, the child is generally in a totally asphyctic state for some time, or it may show signs of life; but these are very slight. The breathing may be sighing, but no movement of the extremities takes place. But even if the respiration is active, it is only superficial, and the movement of the thorax imperceptible. It is some time before the infant cries, and then in a weak, trembling tone; the skin remains flaccid, and has a pale or bluish color. If foreign bodies in the trachea, or excessive cold, prevent a normal respiration, we find added to the above symptoms considerable rattling in the air-passages, and even forcible efforts by the child to remove the offending substance. If, during the first efforts of respiration, the air passes only into a small portion of the lung, which frequently happens when a violent impression has been made upon the brain or spinal cord, the respiration may become fuller after the asphyctic state has passed away; but still, it will never have the depth and fulness which are found in healthy infants. In consequence of this, the anterior wall of the thorax does not expand, but retains the flatness which is characteristic of the fœtus.

Infants affected with this organic lesion have a very pale appearance, the color only changing when convulsive paroxysms set in; it then becomes of a bluish purple; the extremities are moved very little; the voice is hoarse and whining; they possess but little strength to suck, and are hardly capable of swallowing the milk which may be given to them. The eyes are closed the greater part of the time, or they may remain open much longer than in healthy infants during the first hours or days after birth. The eyeball is generally drawn inward, and the pupils largely dilated. Such little sufferers rarely enjoy sleep; they are either in a soporose condition, or in a perfectly quiet state, with opened and fixed eyes. Clonic and tonic spasms disturb them in this state of extreme exhaustion. All patients of this class generally die during the first four or five days after birth, either by suffocation or apoplexy. Usually the fatal issue is attributed to mechanical injury of the brain, and the lesion in the lungs is entirely overlooked. When the atelectasis exists only in a small portion of the lung, perhaps one-fourth or less, the diagnosis is more difficult. Exclusive of the paleness, flaccidity, and unnatural coolness and clamminess of the skin, the short and superficial breathing, which constantly accompany this lesion, one might be inclined to consider such infants perfectly healthy; and we are the more apt to be deceived as the characteristic symptoms may not be observed immediately. Such children take the breast regularly, but nevertheless are less nourished than infants that are perfectly healthy. During, as well as after suckling, the skin suddenly assumes a grayish blue, or bluish-red color, which is particularly marked around the mouth. If the voice was nearly natural immediately after birth, it gradually loses its force, and becomes hoarse. Gradually or suddenly the infant loses its desire for suckling, and with this, no matter if it be several days after the infant's birth, the more important symptoms are ushered in, which plainly show the danger but not the true nature of the disease to the unacquainted; while the body suddenly assumes a bluish color, spasms in the muscles of the face, or of whole groups in the extremities or trunk appear, and threaten the patient with suffocation. These convulsions, which occasionally alternate with those of a tonic character, last a few minutes, disappear entirely, and generally end fatally after the second or third attack; rarely during the first. During these paroxysms the nostrils are widely dilated, the eye is fixed, drawn upward and inward permanently fixed in this position. The eyelids are either entirely closed or widely opened. The voice, during a paroxysm, is hoarse and croup-like; the skin perspires freely, and is cold and livid. With the cessation of the convulsions the warmth returns to the skin; the head and limbs resume their natural position; the patient is able to take the breast for a few moments; but the respiration remains hurried, and the prostration is increased. If by proper treatment, the first paroxysm be alleviated, the following one, which generally appears after twenty-four hours, is less violent; the same with the third, until they cease entirely. The improvement which takes place indicates itself by an unembarrassed respiration, by the disappearance of the hoarseness and bronchial rattling, by easy deglutition and suckling, and by the return of the natural color and warmth of the skin.

Diagnosis.—The diagnosis is not very difficult, as the abnormal respiration immediately points to the seat of the disease. The unfailing signs that larger or smaller portions of the lung, without previous inflammation, are compact and inaccessible to the circulation of blood and air, are a short, superficial, anxious, at times scarcely perceivable respiration; a weak, whining voice; little or no desire for the breast; thorax nearly immovable, &c.

The interference with the proper oxidation and prevention of the proper circulation of the blood, in consequence of this organic lesion of the lungs, denotes itself by the bluish, and, during any exertion or crying, dark purple color of the skin and diminished warmth; a weak, slow pulse; and general exhaustion. Convulsions may be either complications or consequences of the above state. The progress of the disease manifests itself by increased difficulty in respiring; short and rapid inspirations; a weak and whispering voice, anxious and steady exertion to enlarge the thorax; inability of deglutition; sympathetic affection of the brain; aggravation of the symptoms of impaired circulation, etc.

The later, however, the physician is called, after the complaint has existed for some time, and the less he can inform himself of the probable cause, the more difficult will be the diagnosis, on account of the different effects of the disease, and the various complications. On applying the stethoscope, the murmur which the air produces in passing through the lungs is only indistinctly heard. Where a larger or smaller lobe of the lung has taken no part in the respiratory process, the sound is cut off at this point completely.

Treatment.—Few diseases sooner become incurable than, and therefore require such prompt treatment as, the pneumo-atelectasis. If medical aid is called for during the first few hours after the infant's birth, the first indication is to make those cells which are closed respirable. This object may be obtained by general stimulation of the skin, particularly by warm baths, either alone or with the addition of some stimulating substance, such as herba mentha, flor. chamom., etc. These may be previously infused in hot water and then added. During the use of these baths, which should be repeated every two hours until the object is attained, strong friction should be applied over the whole body. The soles of the feet should be rubbed with a flesh-brush until the child makes violent efforts to cry loud. Cold water may also be thrown upon the region of the diaphragm with a syringe, or ether may be sprinkled over the thorax, the infant always being lifted above the surface of the water. The nostrils and fauces may also be irritated with a feather, and enemata of water, with a few drops of ether, applied. Upon taking the infant out of the bath, it should be carefully wrapped up, but in such a manner that no part of the trunk is embarrassed by it. To keep up the irritation which has been excited by the friction and the baths, a small sinapism, two or three inches long and one broad, may be applied across the chest, and allowed to remain until the skin becomes red and irritated. The above treatment will be greatly aided by the appropriate administration of internal remedies. Of these, emetics, or, if these are contraindicated by an affection of the brain, purgatives will be found of great value. Of the former, the honey of squills, or a powder composed of half a grain of ipecacuanha, with the same amount of sugar and magnesia, may be given until free vomiting takes place. Of the latter, a quarter of a grain of calomel may be given every two hours until free evacuations, with some tenesmus, are produced. The treatment is always aided by the frequent suckling of the infant; the more it is compelled to draw the milk from the breast of the mother, the more influential its own exertions are to a complete cure. If, however, all our attempts to relieve the patient are in vain, on account of adhesions and complete obliteration of the cells of the lung, the chief endeavor should be to alleviate, as much as possible, the condition of the patient. The skin of an infant absorbs oxygen, and consequently, even under such circumstances, a sufficient quantity will be absorbed and carried to the blood to sustain life. Our chief attention should, therefore, be directed to the skin, to keep it in its normal condition. For this end, the infant should always be dressed in loose and thin apparel, and care be taken to embarrass no part of the body. It should be kept in a warm and pure atmosphere, the bowels should be kept in a relaxed condition, and everything liable to cause an acceleration of the respiration carefully avoided, if we would prevent violent suffocatory paroxysms. The infant should be bathed two or three times daily in warm water, to which a small portion of vinegar may be added. Other remedies should be employed, as indications may demand.

PART THIRD.

Bi-Monthly Periscope.

SURGERY.

1. Aneurism of the Common Iliac Artery; Formidable Operation of Deligation of the Abdominal Aorta, above the Bifurcation.—An opportunity was afforded, on the 21st inst., of seeing that most unusual and very formidable surgical operation, deligation of the abdominal aorta for large iliac aneurism of the right side; it is, perhaps, the only instance of such a fearful alternative in this disease being carried out in London hospital practice since the introduction of chloroform. The case has occurred in St. Thomas's Hospital, and the operation was brilliantly performed by Mr. South, assisted by his colleagues, Mr. Simon, Mr. Solly, Mr. Le Gros Clark, and Mr. Green, before a vast assemblage of Guy's and St. Thomas's students. The poor young man, the subject of the disease, has been some few weeks under treatment at St. Thomas's. The original history of the disease was very obscure. He had been exposed to very hard work, but did not recollect any start or strain, or injury of any kind in the region of the groin; in short, the history of the origin of the aneurism was as difficult to trace as these cases usually are.

Since his admission to hospital, we observed the tumor had increased extensively, so that, previous to the operation on Saturday, the 21st inst., it had grown to a size of enormous magnitude; the limb on the right side was completely without feeling, from pressure exerted on the nerves accompanying the artery; the aneurismal sac, however, had evidently grown thick, although it had enlarged, and the peculiar blowing sounds of aneurism were to be heard when the stethoscope was applied externally. The operation, as a last resource, naturally attracted much attention in St. Thomas's; as, since Sir Astley Cooper performed it (or, rather, an operation like it in the mesial line) in 1817, it has not been seen in London practice, though Mr. James, of Exeter, ligatured the aorta much in the same way as Sir Astley in a second case, in which he had previously employed the distal operation for inguinal aneurism. Murray, at the Cape of Good Hope, also ventured on a similar operation, but without success; the only other case having been that of Monteiro, at Rio Janeiro, the most successful operation of all, the patient having lived ten days, when he died of secondary hemorrhage, Sir Astley Cooper's patient surviving only forty hours.

The abdominal aorta, it need scarcely be observed, divides opposite the fourth lumbar vertebra, giving off the two common iliac arteries, this bifurcation, occasionally occurring a little higher or a little lower, as the case may be, and on the left of the median line. The common iliac, the seat of the disease in the present case is, in the normal condition, about two inches and a half in length, a little longer on the right side than the left; and when we say that an enormous pulsating tumor of this artery at the right side, the size of a cocoa-nut or very large orange, was plainly felt, and even seen bulging in the right inguinal region, it is easy to conceive the serious gravity of the case. Some long and anxious consultations were accordingly held by Mr. South and his colleagues last week, the balance of opinion tending towards giving the poor man the benefit of the operation. The left common iliac, it will be remembered, is somewhat different from the right, and forms a more obtuse angle with the end of the aorta, and is, of course, crossed by the colon or rectum, while the *right* common iliac is crossed by the ureter of that side, is in relation with the common iliac veins and psoas magnus externally, and is in relation in front with the delicate portion of small intestine (ileum) which is so well known as lying in this region; in the left side, where Mr. South made his first incision, some five or six inches long, the sigmoid flexure of the colon was plainly seen bending backward to form the rectum, and when the hand was introduced into the abdominal cavity, the aneurismal sac and aorta above it were plainly felt.

The first part of the operation, after the patient was placed under the effect of chloroform, consisted in a long incision, carried from the crest of the ilium at the left side (that opposite the tumor) as far as the cartilaginous border of the thorax at the tenth rib, as it is easier to reach the aorta at this side; the abdominal muscles were next successively divided with much care, till at last the transversalis was reached, which was also cut through; one or two unimportant muscular branches of large arteries requiring to be ligatured; the peritoneum was finally arrived at, and the wound now fairly laid open. The intestine seemed quite healthy, and, by opening the wound, the aneurism was plainly discerned filling up the right groin. In this operation, as Mr. Erichsen well observes, "there are not only all the dangers attendant upon the ligature of arteries of the first magnitude, but also the risk of producing fatal peritonitis, whether the abdomen be cut through, or the vessel sought for by stripping up the peritoneum from the iliac fossa." This was too evident to Mr. South not to be neglected, so the operation was done with much care and expedition. A new needle, of ingenious form, had been constructed by Mr. Milliken, which Mr. South now armed with a ligature, and passed under the aorta, about two lines above the bifurcation, trusting, as Sir Astley, to the collateral circulation of the inferior mesenteric artery for the maintenance of the vitality of the parts thus suddenly deprived of blood. The admirable ease with which the operation may be performed under the effects of chloroform was generally observed, and is, perhaps, the chief feature in recommending its being repeated.—*Assoc. Med. Journ.*, June 28, 1856.

2. COMPLETE OCCLUSION OF THE VAGINA, AND RETENTION OF MENSES; RELIEVED BY AN OPERATION THROUGH THE RECTUM. By *Frank Hastings Hamilton, M. D.*, Buffalo.—Mrs. S., of ——, æt. 35, was brought to me

Oct. 19, 1853. Six months before this she had miscarried when in her fourth month of pregnancy. The placenta was retained several days, inducing, by its decomposition, a violent metritis and vaginitis, which resulted, after a few weeks, in a complete closure of the vagina. Since then she has had occasional diarrhœas, and sometimes discharges of blood, especially about the time of her menstrual periods. She has also at such periods a sense of fulness in her loins, and a feeling of weight and pressure in her rectum.

I found the vagina completely closed to within about two inches of the vulva; the rectum and bladder seeming to be in immediate contact. There was no perceptible fulness of the abdomen, nor could I feel any fluctuation through the vagina.

Believing that I could not reach the uterus through the vagina without the risk of opening into either the rectum or bladder, and observing that her health was not greatly impaired, and especially trusting that the period was near when she would cease to menstruate, I declined any surgical interference.

From this time for a period of about two years, she remained very much as when I first saw her, when she was visited by a travelling surgeon, who offered to give her immediate relief by an operation. The operation was made in the presence of her family physician, and consisted in an incision from the vagina directly through into the rectum, as the sequel showed, though at the time this fact was not known. The surgeon supposed he had entered the womb, but that it was empty. A hemorrhage followed which was very near proving fatal. The wound into the rectum closed readily, and she was left in the same situation as before, except that she was much weakened by the bleeding.

March 6, 1856, I was summoned by telegraph to see her, and I found her on the 7th suffering very greatly from the pressure of the accumulated menstrual fluid. For several months, at each period, she had experienced great pain, but during the last four weeks there had been no relief except as it was afforded by chloroform in pretty full doses. She had been almost constantly confined to her bed; the enlarged uterus could be distinctly felt in the front of the belly and in the rectum. Examining with a curved probe introduced into the urethra and with the forefinger of my right hand in the vagina, I easily ascertained that the bladder was so deflected downward at the end of the vaginal *cul-de-sac*, that it would be impossible to reach the womb in this direction without opening the bladder. I therefore determined, as the only alternative, to open the womb from the rectum.

Placing my patient upon the side of the bed, I carried a trocar and canula upon the forefinger of my right hand into the rectum, and then thrust forward the trocar into the womb. On withdrawing the trocar there began to escape through the canula a dark brown, uncoagulated, inodorous fluid. I immediately pushed my finger along beside the canula, and, without effort, tore open the womb in every direction, the walls of which were exceedingly thin. About one pint of this menstrual fluid was evacuated. With my finger I was able to explore the interior of the womb very freely, and I could not feel anything like a neck, the closure in that direction was so complete. On withdrawing my finger I noticed that the size of the opening which I had made was very much diminished by a contraction of the walls of the uterus.

Four months after this operation was performed, I learned that Mrs. S. had enjoyed uninterrupted health from the date of the operation, and an entire release from pain. She has menstruated regularly at each period, and without inconvenience.—*Buffalo Medical Journal*, September, 1856.

3. LETTER FROM PROF. GEO. C. BLACKMAN, to the editor of the *Western Lancet.*—*Burnet House*, Aug. 4, 1856 : Since the appearance of the last number of the *Lancet*, you have assisted me in two operations, which, for several reasons, are worthy of record. I believe with Wiseman, the father of British surgery, that it is the duty of every surgeon to publish his unsuccessful as well as his successful cases. "For my part," he says in his preface, "I have done it faithfully, and thought it no disgrace to let the world see where I failed of success," which failures, he adds, "have attended all my brethren as well as myself, and will attend thee, also, reader, in spite of all thy care and diligence, if thou undertake the employment." The date of this preface was May, 1676 (vide *Chirurgical Treatises*), and, after briefly detailing the cases which have occurred in my practice, I propose to determine to what extent the predictions of the "Parê of England" have been verified, as regards the treatment of *old* dislocations of the shoulder.

About the 10th ult., aided by yourself, I succeeded in reducing by manipulation, without the pulleys, a dislocation into the axilla of eighty days' standing. The reduction was accomplished in a very few minutes, under the influence of chloroform and ether, and the next morning the patient left for the country, in a comfortable condition. Since that, I have received no tidings from him. Encouraged by the result in this case, another patient, himself a physician—a tall, athletic man, and about 50 years of age—decided to submit to the same manipulation, although his arm had been dislocated for about sixteen weeks. The dislocation was downward and inward, and about the tenth week an unsuccessful attempt, by another surgeon, had been made with the pulleys, to which the force of six men was applied for two and a half hours. The patient being under the influence of chloroform and ether, aided by yourself, Drs. Fries, Cary, Graham, and Kaufman, I commenced my manipulations, adducting, rotating, abducting, and elevating the arm. These efforts had been made for about ten minutes, and the least possible violence employed, when a tumefaction appeared in the pectoral region, which in a few minutes attained considerable size. Supposing that the axillary artery was ruptured, as no pulse could be felt at the wrist, a ligature was immediately applied to the vessel at the upper part of its course. The operation was performed about 10 o'clock A. M., and compression of the pectoral region made by means of a sponge and broad roller. On removing this the next morning, the tumefaction had nearly disappeared. The patient continued comfortable, and, about nine days after the application of the ligature, I was compelled to leave the city on a professional visit to Indiana. I left on Friday afternoon and returned on Monday morning, at which time I learned that my patient had died on Sunday morning from hemorrhage at the seat of ligature. Two physicians, his most intimate friends, lodged in the same house with him, but before they reached his bedside the quantity of blood lost was so great that he sank exhausted in about two hours from the first and *only* attack of hemorrhage. Previous to my departure for Indiana, I had suggested to the physicians in charge the importance of having compressed sponge at hand, to be used in any emergency of the kind, but this was not used by the attendant; instead of applying pressure instantaneously, he went in search of the physicians, who at that early hour in the morning were in bed. The time thus lost unquestionably led to the fatal catastrophe.

I might refer you to numerous instances of success in the reduction of old dislocations—from two to six months' standing—which have occurred since the days of Wiseman, but I propose to notice only the accidents by which some of these attempts have occasionally been followed. One of the earliest recorded, so far as we have been able to learn, is the case reported by Desault in the *Journal de Chirurg.*, tom. iv. p. 301.

During the efforts of this surgeon to reduce an old dislocation, suddenly a considerable "*tumeur aerienne*" appeared below the clavicle, which Desault attributed to the "*degagemen de l'air amasse entre les cellules rompues du tissu cellulaire!*" In a few days this tumor entirely subsided under the influence of "*astringens et une compression methodique.*" Whether it was the result of a disengagement of air from the lacerated cells of the cellular membrane, as supposed by Desault, or of a rupture of bloodvessels, we leave the reader to determine.

It is somewhat singular that Desault should have met with two cases of this extraordinary phenomenon. Pelletan's explanation, in our opinion, throws some light on this subject. In an attempt to reduce a luxation of four months' standing, the same kind of "*tumeur aerienne*" appeared. It was opened, and the hemorrhage from the torn artery was fatal. (*Clin. Chirurg.*, tom. ii. p. 95.)

Malgaigne states that he is acquainted but with a single instance of an "*emphyseme veritable*" following a reduction, and that is the one reported by Flaubert in his "*Mém. sur plus cas de Luxations dans lesquels les Efforts pour la Reduction ont été suivis d'Accidents graves,*" which appeared in the *Répertoire d'Anat. et de Phys.*, 1827. The patient, a female, æt. 70, screamed violently during the operation, and Malgaigne is disposed to believe that the emphysema was independent of the luxation or the reduction. (*Traité des Tract. et des Luxations*, tom. ii. p. 147.)

Malgaigne himself attempted reduction in a case of sixty-eight days' standing, but was forced to discontinue his efforts in consequence of the sudden appearance of a tumefaction in the axilla and on the shoulder. Ice was applied, and in the course of a few hours the swelling was arrested; and by the twenty-second day the blood, which he thinks came from ruptured muscular branches, was completely absorbed. (*Op. cit.*, p. 150.)

A case occurred to Flaubert, in which, besides the tumefaction, the pulse could not be felt at the wrist. The hand was cold, insensible, and immovable. The next day, however, the pulse returned to the wrist, and in the course of twenty-six days the effused blood was absorbed. Froriep lost a patient from a rupture of the axillary vein, which proved fatal in an hour and a half after the operation. (*Op. cit.*, p. 151.) The reader may find in the comprehensive treatise of Malgaigne details of cases in which the axillary artery was ruptured. We pass over those observed by Verduc, Petit, Platmer, Delpech, and that referred to by Sir Charles Bell in his *Operative Surgery.* The late Dr. John C. Warren tied the subclavian to arrest the progress of an enormous aneurismal tumor in the axilla, the result of the reduction of a recent dislocation, and of supposed pressure of the operator's boot. In this instance, the coats of the artery were so contused that sloughing took place, during a fit of coughing, five days after the accident. (*Am. Journ. of the Med. Sci.*, vol. xi., N. S., 1846.) In 1824, M. Loudet lost a patient at the hospital in Rouen. The dislocation was of only eleven days' standing, and was complicated with a fracture of the margin of the glenoid cavity, as in the two fatal cases which occurred in the practice of Prof. Gibson, of Philadelphia. The latter cases are too familiar to every surgical student to require particular mention in this place. Prof. Gibson, in connection with the report of the above cases, gives briefly the details of a fatal operation by David, of Rouen. The luxation had existed several months, and great force was employed in the reduction. This resulted in an inflammation, mortification, and death. Some years since, Lisfranc attempted the reduction in a case of four months' standing. He succeeded; but on visiting the patient an hour afterwards, he was found dead. His death was attributed to cerebral congestion, as the autopsy showed the axillary artery, veins, and nerves uninjured. (Vide *Bul. de la Soc. de Chir. de Paris*, tom. prem., p. 718.) In the same volume, MM. Lenoir and Larrey refer to cases in which they had met with lesion of the brachial plexus, giving rise to paralysis, and yet these were recent cases, and the reduction was most readily accomplished. But I will not multiply cases of this kind; those already related will suffice, in the minds of many, to answer the question—At what period of time, after a dislocation of the shoulder, is an attempt at reduction justifiable? When Prof. Gibson lost his first patient, he wrote that "should a case similar in external appearance to that of James Scofield again occur, I shall feel justified in adopting a similar course." (*Gibson's Surgery*, vol. i. p. 824, 5th ed.) When he had lost his second patient (John Langton), he expressed his views as follows: "The conclusions which I am now prepared to draw are directly the reverse of what I have stated in some of the foregoing pages; I am now disposed to condemn, in the most unqualified terms, all attempts at the restoration of *ancient* luxations of the humerus and other bones, except in cases where the patient is remarkably thin and debilitated, and where there has been little or no inflammation at the time or subsequent to the displacement." (*Op. cit.*, p. 351.) At a meeting of the Société de Chirurgie of Paris, July 3, 1850, M. Maisonneuve reported a case in which, after M. Velpeau had failed, he succeeded in reducing a luxation of the shoulder of twelve weeks' standing, and, elated with his triumph over the veteran of La Charité, he asserts that there are but few cases in which, with the aid of chloroform, we may not succeed. "*Quelles resistances y a-t-il a vaincre ici, en effet?*" he asks. "*Il n'y a presque pas d'engrenage; les muscles sont neutralises par le chloroforme; il ne reste donc que des adherences fibreuses: l'on pourra presque toujours les surmonter les rompre.*" (*Bul. de la Soc. de Chir.*, tom. i. p. 716.) But these fibrous adhesions are not the only obstacles to overcome; where the tissues surrounding the head of the bone have become consolidated by inflammation, the axillary vessels and nerves must be in danger of laceration. Perhaps, however, as M. Maisonneuve suggests, this accident may be avoided by "*extensions preparatoires,*" as in the attempts to restore contracted limbs to their natural shape.—*Western Lancet.*

PRACTICAL MEDICINE.

1. EXTRACT FROM AN ARTICLE ENTITLED OBSERVATIONS ON PERICARDITIS. By *Robert Law,* M. D., Professor of the Institutes of Medicine in the School of Physic in Ireland.—Have we any sign or signs upon which we can rely as indicating adhesion of the pericardium?

Dr. Hope remarks: "I certainly consider this diagnosis to be one of the very few connected with the heart which cannot be made with absolute certainty, and I never, therefore, venture to assert respecting it."

He further remarks that, by a combination of signs, he has succeeded in detecting it. First, by the heart's beating as high up as natural in the chest, and causing a prominence of the cartilages of the left præcordial ribs. Second, and which he regards as the most characteristic of all, an abrupt jogging or tumbling motion of the heart, very perceptible in the præcordial region with the cylinder. Third, a history of previous pericarditis, especially if connected with acute rheumatism, affords strong presumptive evidence corroborating the preceding signs, and the absence of such history should make the auscultator pause before he ventures on a diagnosis in stronger terms than that it is probable or possible. With regard to the first sign stated by Dr. Hope, I would say that I have never observed this high action of the heart and prominency of the cartilages of the left præcordial ribs in adhesion of the pericardium, but I have observed them in another morbid condition of the pericardium, in case of effusion into its cavity, when the fluid, gravitating towards the most dependent part, pushed up the organ towards its base, and produced a prominency corresponding to the base, the appearance which Louis designates "voussure." It is the pushed-up heart that forms the prominency, not the fluid, as is generally believed.

As to the second sign proposed by Dr. Hope, I can only say that his description of an abrupt, jogging, tumbling motion does not describe the irregular action that I have sometimes observed in cases of adherent pericardium. Dr. Walshe's description of it as a tumultuous, confined action goes nearer to conveying an idea of what I have heard. As I have observed it, it has been a kind of pulling, dragging motion, as if one contraction of the ventricle was resolved into a series of short, abrupt contractions, sometimes so feebly and faintly expressed as if no impulse were communicated to the blood by the heart, as it passed through it. The jogging, tumbling motion that I have observed has been in quite a different affection, viz: in the weak, gouty heart. M. Bouillaud remarks: "Je ne connais encore aucun signe qui puisse faire reconnaitre les adherences du pericarde." Dr. Sanders thought he had discovered a positive sign of an adherent pericardium in the retraction or dimple taking place during the systole of the ventricle in the epigastrium, immediately below the false ribs, and which he ascribed to the diaphragm being drawn in by the ascending motion of the heart. Dr. Hope observes on Dr. Sanders's signs: "I have searched for this attentively in several cases of adhesion, but have not been able to detect it in any degree that could constitute a sign." Dr. Heim, of Berlin, also proposed this sign. Laennec, speaking of it, says: "J'ai cherché inutilement depuis deux ans verifier cette observation chez tous les malades qui presentaient quelque signe de trouble de la circulation, et je n'ai jamais pu aperçevoir le creux dont il s'agit, et dans le nombre de ces sujets il s'en est trouvé plusieurs dont le cœur adherait au pericarde." Dr. Stokes is the last authority to which I shall refer, as being the latest, and who had, therefore, the opportunity of testing the value of the signs of those who preceded him. He remarks: "I more than doubt that there is any certain physical sign of adhesion of the pericardium, and have never been able to verify the sign of Dr. Hope, of the double jogging impulse." I am bound to say that none of the signs hitherto proposed has done more than to enable us to assert the likelihood of an adherent pericardium.

The sign which I propose, and with confidence, has this advantage, that we need not have followed the disease in its progress, nor do we require to have had any previous knowledge of the case. I have again and again tested it truth by *post-mortem* examination, as have others to whom I have communicated it, and have found that it may be relied upon. The sign to which I allude is "*the persistence of the same extent of dulness to percussion in the præcordial region, no matter what position the individual may assume.*" The area of dulness on percussion in the præcordial region will be the same under every varying position of the body. The heart becomes so braced up that it cannot move as it does in its normal state, when, if examination be made, the patient either lying, or sitting, or standing, the results of percussion will vary accordingly, the dulness being greater in the first position, and less in the two latter. The individual himself, also, is quite conscious of the existence of some solid resisting body within his chest, which does not move in the changes of posture of his body, but impedes its motions.

I have proved this sign in cases where I have seen the patients all through their attack of pericarditis, and also in cases where the adhesion had been already formed, and have never found it to disappoint me. I therefore claim for it that it is *the physical sign* that may be relied on in proof of an adherent pericardium.—*Dublin Quarterly Journal of Medical Science.—Med. Examiner*, Oct., 1856.

2. Albuminuria.—*M. Mauthner*, in the albuminuria and dropsy after scarlatina in children, recommends the exclusive use of a milk or rice-milk diet. Under its influence, he says, an abundant urinary flux becomes established, which causes the disappearance of the dropsy; but should it not suffice for the cure, he would seek to modify the urinary secretion by the use of alkalies. He recommends urea to be given in such cases, in doses of one-third of a grain, mixed with sugar. When a dose of six or eight grains is arrived at, he says, it occasions an abundant secretion of urine, and rapid disappearance of the dropsy.—*Brit. and For. Med.-Chir. Rev.*, July, 1856.

3. A New and Original Method of treating Tapeworm. By *J. Gotham, Jr., M. D.*—As it is my desire to keep you advised of all the improvements in medical and surgical practice which this prolific age is ushering into being, it is my happy privilege now to bring to your notice one of the most ingenious, if not successful—the most far reaching, and deep searching, if not most likely to prove profitable, invention, ever accredited to Yankee wit and skill. It is one before which the lustre of the genius which produced the new operation for vaginal fistula must wax dim, and the discoverers of catheterism of the lungs must "pale their intellectual fires." The government of the United States has immortalized its history by the issue of letters patent, securing to the inventor the exclusive right for fourteen years, of using a "Trap for Tapeworm," a description and engraving of which are given in vol. i. for 1854, of the Patent Office Reports.

The title of the description in the report is thus: "No. 11,942, Alpheus Myers, M. D., Logansport, Ind., Tapeworm Trap. Patented Nov. 14, 1854," and is thus described (in part): "The trap is made of gold, the length being less than one inch, and the diameter one-fourth of an inch." The shape and size, as I judge from the drawing of this important addition to the materia medica, is very like that of the little cases in which we buy the leads for our pencils, and consists of three parts or sections. In the upper cup or section, is placed *the bait*, in the middle section is a number of points operated by a spiral spring, to stick and secure the monster with, while in the lowermost section is an opening through which he is supposed to put his head, in search of the bait. In doing this he touches the spring, when he is seized and pinned fast by the points. The directions for using the instrument are given as follows: "Bait being placed in the cup, the trap is set and swallowed, after the patient has fasted several days, one end of the cord attached to the upper end being returned from the mouth. The worm in reaching the bait through the opening, touches the spring, the action of which drives the teeth of the middle section into his head, when both the trap and worm may be withdrawn together." "In this manner the inventor asserts *that he has operated successfully*," but whether in a mill-pond, a trout brook, or in the human stomach he does not say. But the avariciousness of this Dr. Myers is quite equal to his ingenuity, for he has not only patented the "trap," but he has actually patented the "*operation*." In the same official volume we read, "No 11,943, Alpheus Myers's Operation for removing Tapeworm from the Stomach;" which patent is thus described: "This operation consists in making the patient swallow a trap after two to six days' fasting, and then leaving him at rest until the worm is caught, when both trap and worm are gently withdrawn. If the worm be not caught in twelve hours, the trap must be inspected, and again baited.—*Claim.* The process herein described of removing tape or other worms from the stomach or intestines, by means of a trap, which is baited and swallowed by the patient, and is caused to capture them by the seizure of the bait. No illustration."

Thus *Doctor!* Myers has contrived to throw the ægis of the U. S. Patent Office over his genius, to enable him to monopolize, not only the instrument, but has, may I not say, *maliciously*, attempted to deprive us of the sport of angling for these *in-human* reptiles without his special permission. I have no objection to being obliged to buy one of his "traps" of him, *when I want to use it*, and he may demand what amount he pleases for it, but to deprive me of the liberty of fishing for tapeworm with any body else's machine is cruel. I am almost malicious enough to indulge the wish that he may never make his fortune by it.

But, Mr. Editor, you will think I am taking up too much of your valuable space with this matter, and to be serious on the subject, my object in drawing the attention of your readers to it is simply to expose the shameful ignorance, not of Alpheus Myers, but of the officers of our government, who would take money from a man for so gross an absurdity as this. There are physicians connected with the Patent Office, men whose names stand well before the country, and how they or the commissioner, could have allowed the seal of the office to be fixed to such a document, and how they could have consented to take the money (the two patents have cost at least $60), for such a monstrously ridiculous contrivance, surpasses all comprehension. It is a disgrace and crime which cannot be too soon atoned for, in the only possible way, by returning to Myers his money. The treasury has no right to such ill gotten gains. This subject came accidentally to my knowledge from a source by which I am assured that the official reports contain many other equally absurd grants—none *more* absurd can be imagined.

Apropos to tapeworm: I have lately seen and examined a specimen of it, 56 inches long, expelled from a patient in the New York Hospital by an infusion of *pumpkin seed.* Eight ounces of boiling water added to two ounces of bruised seed, was taken in one dose, at 12 o'clock, followed in three hours by an ounce of castor oil, by which the worm was expelled about 6 o'clock, with its head entire, and alive.—*Med. and Surg. Reporter*, Sept., 1856.

4. SULPHATE OF BEBEERINE. By *Robert Neilson, M. D.*, of Tuscaloosa County, Ala.—Some time since, a friend sent me a few ounces of the sulphate of bebeerine, requesting me to test its power, and publish the result, if I thought it proper to do so, which is my apology for placing this communication at your disposal.

The adulteration of quinine and its increasing scarcity, strongly demand the development of some other article to supply, if possible, its place. Occasionally an agent possessing some merit is brought forward, and with little trial, and still less accuracy observed, is discarded or placed under ban.

Such has been in part the history of the sulphate of bebeerine; mankind being ever prone to search for precedent, rather than endure the patient toil to discover things new and untried, prefer to take the views of the old world, than to call forth the energies of our native intellect.

I have experimented with several indigenous plants, but have found them inferior to the sulphates of quinine and bebeerine. The latter is inferior to the former in general application, but superior in some special conditions of the system. In cases of intermittent, prone to relapses, Fowler's solution is not more effective than bebeerine; or if diarrhœa attends them, its astringency and anti-periodicity are happily combined to arrest it. We do not intend, while now in its infancy, to place it side by side with quinine, but trust that whatever of merit it may possess, will be submitted to the closest investigation.

It is my opinion, that one reason why it has not been more approvingly noticed, is because its therapeutical application is not well understood. To succeed with any medicine requires a nice adaptation of its peculiar power to the diseased condition.

No skilful physician would think of giving opium in active inflammation of the brain, yet after depletion it may be highly useful. Thus, while the bebeerine possesses strong anti-periodic power, it is also astringent and slightly stimulant, I am satisfied from reason and actual experiment, that it cannot be exhibited successfully where inflammation, or a tendency to it obtains. Nor can it be given during the paroxysm of fever without increasing vascular action; also, if exhibited in this stage it produces emesis, or nausea, to which it is more prone than quinine. It is more effective when used in the distinct remissions or intermissions of fevers, and hardly admissible during any other stage. It sometimes has an emetic effect, best obviated by combining with it some one of the tinctures of opium. Being soluble in water, I am accustomed to exhibit it in a solution of twenty grains to the ounce of water.

During the summer and autumn of the years 1854–5, I used the bebeerine occasionally in intermittents when relapsing, after quinine seemed to have lost its action, and generally with success. Pleased as far as I tried it, I determined to test its relative value as compared with other anti-periodics. Accordingly, twenty cases were treated with it, and the usual preparatory adjuvants—seventeen of whom were cured, one (a case of tertian), ran into the quotidian type, cured by quinine; the two remaining cases being threatened with gastritis, the remedy was abandoned, and they were cured in the usual way; but I am satisfied the bad symptoms were occasioned by over-eating. The case of quotidian type was a perfect failure under apparently favorable circumstances for its use.—*Southern Medical and Surgical Journal,* August, 1856.

MISCELLANEOUS.

1. STERILITY AMONG NEGROES—A CASE. *From a Country Practitioner.*—"Barrenness is more common among negro women than whites, in my range of observation. Many reasons are assigned, by physicians, planters, and overseers, for this fact; some supposing the women have knowledge of an art or herb by which conception may be prevented, or abortion procured. An infusion of the bark from the root of the cotton plant, or, according to some, of the blossoms or green pods, and also of the hydropiper, has a reputation in this way. In more than twenty years' experience on cotton plantations, the writer has never known an authenticated instance in which either of the above, or any herb, art, or incantation has been used by them. On the contrary, he has found negro women remarkably solicitous to bear offspring, and much attached to them while young. He has been consulted hundreds of times by them, and begged for something to 'make them breed.' Aside from remedies addressed to the general health, he is not aware of ever having prescribed anything efficacious. Infusion of the blue vervain, squaw-root, horse-radish, and pills of assafetida, aloes, and myrrh have been his favorite placebos, and he has often been amused with accounts of their success.

"The following case being curious, I submit it, without attaching any great importance to the directions given, or drawing any conclusion from the result, though I intend to repeat the same when opportunity offers, and would suggest it to others:—

"A negro woman, aged 30 or 32; married at 17. I have known her from childhood. She has been an out-door hand, and healthy, except slight dysmenorrhœa in the winter and spring. She had never been pregnant, and had exhausted my routine of practice in such cases, without effect. Being on the plantation about the first of October, 1855, she came, with the approbation of her master, to consult me again. There were at the time some women in the quarters waiting to be confined. I directed her to go in and assist with the next one, and, so soon as the child was dressed, to apply it to her own nipples and allow it to draw, and to continue this from day to day till she had an appearance of milk. Within a week a child was born, and she tells me she did faithfully as I directed, keeping it up four days. This was near the middle of October; and on the 13th of this month this woman was delivered of a fine, full-termed girl child. J.

"PETIT GULF HILLS, July, 1856."

The foregoing case is fraught with much interest. The phenomenon recorded by our contributor may, in times past, have passed unnoticed, or, at most, it may have been honored with the term "wonderful coincidence." At the present day, however, it is well calculated to arrest the attention, and we begin to dignify the circumstance by subjecting it to the test of the great crucible, cause and effect. A negro woman has been married fifteen years; she is a field hand, and healthy, except slight dysmenorrhœa in the winter and spring; the materia medica is exhausted in efforts to make her "breed;" finally she is told to suckle a newly-born infant; she does so during four days, and nine months thereafter she is delivered of a child.

That a so-called sympathy exists between the mammæ and uterus has long been admitted. If the recently delivered woman is threatened with hemorrhage, we put the child to the breast, and frequently efficient uterine contractions are forthwith aroused. "Oh, Doctor, I can't suckle this child; it brings on such awful after-pains the moment it touches the nipple," is the common cry of the parturient woman. "Put a blister on her breast," or "make a puppy suck her breast," is the every-day direction of old women in cases of amenorrhœa. "What is the condition of her breast?" is the certain interrogatory of the physician, when consulted as to the existence of pregnancy.

In 1849, Tyler Smith published a work entitled *Parturition, and the Principles and Practice of Obstetrics.* On page 138 we find the following passage:—

"Irritation of the mammary nerves may produce abortion. This cause is seen in cases of undue lactation, complicated with a second pregnancy. Cases occur in which, during prolonged lactation, two or three conceptions and abortions follow each other, the latter being caused by the irritation of constant suckling. I have observed cases in which, owing to the synergic action between the uterus and breasts, the secretion of milk had been almost entirely arrested by conception, the infant being chiefly supported by feeding. The child would still suck most vigorously, in its attempts to obtain milk, until the uterus was excited to the expulsion of the ovum; and, after the abortion has occurred, the secretion of milk returns abundantly. If the synergic relations between the mammæ and the uterus required any more obvious proof, I might refer to cases on record in which actual metritis has been caused by the application of sinapisms to the breast in amenorrhœa."

Recently we notice that this author says he was "roughly criticized" for advancing the above idea; and he now calls to his standard Dr. G. S. Bedford, of New York, and he says that "Professor Seanzoni has founded upon it (the idea) a method of inducing premature labor by irritation of the mammæ."

With such evidence of a true synergic relation existing between the mammæ and the uterus, and consequently, or it may be primarily, between the ovaria and the mammæ, it seems to us by no means unreasonable to suppose that the dormant energies of the female generative apparatus may be by this mammary irritation, and by this alone, aroused to the requisite degree of activity. All the phenomena of sympathetic action between the mammæ and the generative organs appear to us through the uterus as the mirror; irritate the uterus, and the mammæ sympathize; irritate the mammæ, and the uterus sympathizes, or at least the sympathy is referred by the patient to the uterus, and so recorded by us. Yet, when we reflect on the subject, and in considering the true philosophy and phenomena of generation, so far as they are known, we are forced to regard the uterus as of secondary importance; in fact, in the classification of the female generative organs, it is now being regarded as *gestative* in its functions. On the other hand, the ovaria occupy the very first position in point of importance. Deprive the female of these organs, and, so far as the procreation of the species is concerned, she no longer retains the most important attributes of the sex. Deprive her of the uterus, however, and we still find her the embodiment of feminity; and, although physically incapacitated for gestative purposes, still, could the male element of procreation be placed in contact with the ovary, the new being would be started. The ovaria being more remotely located, and the custom of women being to refer all pelvic distress to the womb, it has become a fashion with the profession to look no further than this latter organ for an interpretation of all symptoms evinced; but a new era is dawning on us, and the researches of Tyler Smith and kindred spirits may yet warrant us in saying that the case related by "A Country Practitioner" comes under the law of cause and effect. —*New Orleans Medical News and Hospital Gazette*, Sept. 1, 1856.

[A case involving the principles of treatment set forth in the preceding history and remarks has been related to us by a brother practitioner. A young and tolerably healthy female, whose menstrual function had never been perfectly performed, had been married for eight or ten years without having given the accustomed and much coveted proof of connubial happiness. Believing that her impotence was in some way or other connected with her imperfect menstruation, she called upon her family physician, who, agreeing with her notions concerning the probable cause of the difficulty, prescribed the use of mustard plasters to the mammary regions and sacrum for a few days preceding the monthly period. The effect was a perfect establishment of the catamenial discharge, and, in less than a year, the appearance of a well-spring of—doubtful pleasure.]

2. **Fatal Error in a Medical Book.**—We insert the following important correction, only adding that, in our judgment, either dose named is too large for safety:—

Strychnia.—Dr. Fleetwood Churchill calls attention, in the English journals, to an error in his work on *Diseases of Females*, which might lead to serious consequences. He states in the work alluded to, in treating of amenorrhœa, that strychnia has been given advantageously for its cure, in the dose of from *one-tenth of a grain to a grain*, three or four times a day. The latter dose would be unquestionably a poisonous one. The dose should be from *one-sixteenth* to *one-twelfth* of a grain, and it would not be wise to give more.—*American Medical Gazette*, Sept., 1856.

3. **Forfeiture of Diplomas.**—The graduates of both of the medical colleges in Georgia receive their degrees with the express stipulation that the faculty have the power to cancel the diplomas of any of their pupils who shall at any period degrade themselves by becoming quacks. Well done, Augusta and Atlanta. But what is to be done with those colleges which graduate notorious quacks on payment of fees, knowing that they are and intend to be quacks from the start?—*Ibid.*

EDITORS' TABLE.

WE have intended for some time past to give expression to a very general opinion concerning the present ridiculous custom, on the part of the American Medical Association, of limiting its choice for the Presidency to the city in which its annual session happens to be held; but finding the subject so well presented in the September number of the *Buffalo Medical Journal*, we take the liberty of transferring the editor's remarks to our "Editorial Table." While, however, we give our hearty indorsement to the general views therein set forth, we may be permitted to say that, in our judgment, in no city of the Southwest are there to be found more men deserving of the high honor referred to, than in Nashville, where the next meeting is to be held.

"THE PRESIDENCY OF THE AMERICAN MEDICAL ASSOCIATION.—It is evident that the time has arrived when some change in the manner of selecting the presiding officer of our national congress must be made. We have felt for years that some one should speak out upon the subject. We would have spoken a year ago, had not the fact that the meeting of the Association for 1856 was to be held at Detroit, and that the candidate then most prominent, and since successful, had been in a position of personal antagonism with an interest which we represent, prevented us. Any attack made by us at that time would have been construed as personal, and as having its origin in local prejudices or jealousies; we therefore held our peace, and consented to forego our protest against an evil which must eventually impair the respectability of the Association, and turn from it the regard of the best men in the profession.

"The next meeting is to be held at Nashville. We have none but friends in that locality, and we believe that they too will acquiesce in our plans for reform, or help to suggest another looking to the same end.

"The evil to which we allude is self-evident. Custom, not law, has made it the usual course to select the President of the Association from the city in which the session is held. Thus the two meetings held at Philadelphia have given us Profs. Chapman and Wood as Presidents; that in St. Louis, Prof. Pope; that in Richmond, Dr. B. R. Wellford; and that in Detroit, Dr. Z. Pitcher. In only one instance has the rule failed to hold good. At the meeting in New York, in 1853, no one worthy of the office was found in that great city, and Dr. Jonathan Knight, of New Haven, was chosen. We hoped then that the precedent thus established in a large city might be permitted to hold good in the small towns; but it is not so to be. It is evident that until it is put out of the power of the nominating committee virtually to elect the President, we shall forever be subjected to the rule of that happy individual who happens to be the Nestor of the place of meeting. Gray hairs are honored at the expense of working men. Worse than this. To follow back the chain of promotion, we shall find that the Association take the man the nominating committee choose to give them, and the committee take the man they are instructed to take by the wire-pullers of the particular locality. In a small town, with from forty to fifty physicians, this matter can usually be cozily arranged among themselves, with more regard to their own interests than to the dignity of the Association.

"We regard the Presidency of the American Medical Association as an honor too high to be lightly bestowed upon any man. The consideration of locality is the last that should be thought of. It is nonsense to make it a mere compliment to a town, in return for a good feed and abundant champagne. The occupant of that high station should be chosen from the profession at large. He who has labored; he who through many years has toiled to advance his profession; he who has built up for himself a name as a discoverer or medical philosopher, and who perhaps has found no other reward than a good name for all his efforts, such an one is our candidate.

"Under the present system, we can only elect him by accident. Such men as Bartlett, Drake, Morton, Parker, Mott, or Gross can never be chosen under our present system. Those of them who are dead never would, and those who live never will do the necessary work.

"The machinery by which Presidents are made under the present constitution is very simple. A special committee of one from each State is appointed by each delegation to nominate all the officers. This special committee is a small body of men, and will never have the courage to break down the strong precedent now established. At the last meeting, Dr. Bloodgood, of Illinois, offered a resolution 'That the constitution of this Association be so amended as that hereafter the President shall be elected by ballot, and shall not be resident of the State in which he is elected.'

"On motion of Dr. Watson, of New York, this was laid on the table. We do not like the resolution. The best man might be a resident of the State in which the meeting was held, and locality should not exclude him.

"What shall we do? The nominating committee is a bad piece of machinery in some respects, and a very good one in others. We have shown where its faults lie. It only requires a moment's thought to perceive that it must very much facilitate the selection of a place of meeting and the nomination of committees. Indeed, the argument of convenience is so strong, that we would willingly allow it the choice of all the officers except the Presidency, reserving that as a distinguished honor to come direct from the Association.

"We propose the following amendment to the constitution:—

"'SECTION IV.—*Officers.*

"'The officers of the Association shall be a President, four Vice-Presidents, two Secretaries, and a Treasurer. *With the exception of the President*, they shall be nominated by a special committee of one member from each State represented at the meeting, and shall be elected by vote on a general ticket. *The President shall be chosen by ballot of all the members, the first ballot to be informal, and* *the person receiving the highest number on the second ballot to be declared elected.'*

"Our amendment consists in the addition of the Italicized portions to the present provisions. We throw it out to the profession at this time, in the hope that it may excite discussion in the journals. We suppose that the motion of Dr. Watson, laying Dr. Bloodgood's resolution on the table, was superfluous; and that it may be properly brought up for discussion and amendment at the next meeting. Dr. B.'s resolution would have been laid on the table under the rule, had Dr. Watson withheld his motion. If we are right in this supposition, our proposition may come up at the Nashville meeting, as an amendment to Dr. Bloodgood's.

"If we had any faith in committees, we should move simply to instruct them to be governed by the spirit of the constitution, which does not circumscribe their choice to any locality; but we have no such faith, and so resort to what seems to be the only practicable plan. As, under the present rule, the President is chosen early in the session, the proposed change can have no effect on next year's choice. We should, however, wish the amendment acted on before the selection of the place of meeting for 1858, for obvious reasons."

WE unintentionally omitted to notice in our last issue the organization of another school of medicine in New Orleans. The faculty consists of Drs. E. D. Fenner, A. F. Axson, T. Peniston, S. Choppin, J. L. Crawcour, Howard Smith, J. M. W. Picton, D. W. Brickell, C. C. Beard, and A. A. Peniston. With the great facilities which New Orleans possesses for the prosecution of clinical medicine and surgery, and practical anatomy, and the high character of the teachers engaged in the new enterprise, we do not doubt that the number of medical students who usually spend their winters in the "American Paris" will be largely increased. Lectures commence early in November.

WE learn from the *Montreal Medical Chronicle*, that the Medical Faculty of Trinity College, Toronto, Canada West, have resigned their professorships. The reason, as publicly stated in the daily prints of Canada West, is, that the Faculty caused an advertisement to be inserted in the local papers, stating that students in medicine henceforth would not be compelled to subscribe to the thirty-nine articles of the Church of England, and that no religious test would be demanded of them. And it was furthermore asserted that pupils could, by following the course of instruction at Trinity, procure, if they pleased, their degrees at any other University. The Council of the College, naturally indignant at this open declaration of rebellion and independence of the Medical Faculty, called upon them to withdraw the obnoxious advertisement from its place of appearing, and to return to their former terms of connection; but the Professors declining to yield, and the difference not being removable in any other way, the latter were constrained to resign their various chairs, which, we believe, they have filled, during the few years they have lectured, in a distinguished and profitable manner.

In an interesting address delivered by Dr. Simpson, recently, to the newly elected graduates of the Edinburgh University, he advises the M. D.'s not to expect to make as much money as if embarked in trade, or in any other profession besides the medical, but cited the following instances of the "ups and downs" of great men's lives. Dr. Hall, in the Crimea, has a salary of two guineas a day, "an income far less than that made by many a second or third-rate village apothecary (general practitioner) in England;" Dr. Cheyne, of Dublin, when only 34 years of age, made only three guineas during the first half his second year's practice — nine years subsequently he was making £5,000 annually; Dr. Chambers, in his fifth year of practice, and when 34 years of age, made £211 in fees — seventeen years subsequently, £9000 annually; Dr. Baillie £11,000 in one year; Dr. William Hunter had not money to advertise his lectures. In 1788, the son of an English clergyman attended the classes of Edinburgh, and lived in a room which cost him 6*s.* 6*d.* a week; in after life, as Sir Astley Cooper, his professional income in one single year amounted to £23,000. We might add to these the following items, stated on good authority. Mr. Colles, of Dublin, made £11,000 a year; Albert Smith, a surgeon, gave up his profession in dismay, and made £19,000 the next winter of "Mont Blanc;" Professor Anderson, now in London, makes something like £10,000 a month, displaying the absurdities of table turning and mesmerism. £86,000 is said to have been recently realized by the sale of a copyright of a newspaper which originated in the sale and advertising of a patent medicine, while we fall out with Dr. Cormick's *Association Journal* for spending £15,000 in fifteen years, in struggling to uphold legitimate medicine. Homœopaths in London make double as much money as any seventy average surgeons.—*Dublin Med. Press*, from *N. O. Med. News.*

There was recently exhibited to the classes of the Pennsylvania and Jefferson Medical Colleges of this city, an individual in whom there has been an absorption of almost the entire humerus of the right arm. The patient—if such he may be called—is a man now over fifty years of age, who, when about eighteen years old, met with two successive simple fractures of the bone in question, at an interval of three months. The first fracture united under the ordinary treatment, but not so with the second; the fractured ends became rounded off, as is usual in the formation of an artificial joint, continued in this condition for some weeks, and then became progressively removed by absorption, until the bone entirely disappeared from about two inches above the elbow to within less than an inch of the head, and thus has the limb remained for the past thirty years. The period occupied by the process of absorption, was about six years, the health of the individual being at the time unimpaired.

In the absence of any leverage whatever—the organic as well as the earthy constituent of the bone having been absorbed—the man is unable to perform any of the usual movements of the member, but by muscular contraction the interval between the elbow and shoulder may be shortened to the extent of several inches, and a weight of over a hundred pounds readily raised. It is indeed really wonderful to what an extent and variety of uses the limb may be employed. For several years the man was engaged as a laborer on a railroad route, and is said to have accomplished as much daily work, with the shovel and pickaxe, as any one of his fellows. An account of this remarkable case was published, many years ago, in the *Boston Medical and Surgical Journal.*

PROF. GEO. C. BLACKMAN has become the proprietor and one of the editors of the *Western Lancet.* The simple announcement of this fact is sufficient evidence that the usual vigor with which the *Lancet* has been heretofore conducted will be materially increased. As a terse and bold reviewer, and an energetic and pointed contributor to surgical science, Prof. Blackman has, perhaps, no superior in this country.

IN the August No. of the *North-Western Medical and Surgical Journal* is a long and very valuable report to the Illinois State Medical Society, on Practical Medicine, by Dr. Samuel Thompson, which we would have gladly transferred to our bi-monthly Periscope, had not the crowded state of our pages prevented. The report is mainly taken up with the consideration of "Periodic Fevers," as they prevail in Illinois, and embraces copious tables which will prove a rich treat to the medical statistician.

THE Trustees of the Fiske Fund, at the annual meeting of the Rhode Island Medical Society, held at Providence, June 4, 1856, announced that the premium of one hundred dollars offered by them in 1855, for the best dissertation on the following question, "*Does pregnancy accelerate or retard the development of tubercle of the lungs in persons predisposed to this disease?*" had been awarded to the author of the dissertation bearing the motto—

"Qui fugit molam farinam non invenit."

And upon breaking the seal of the accompanying packet, they learned that the successful competitor was Edward Warren, M. D., of Edenton, North Carolina.

They propose the following subject for 1857:—

What are the causes and nature of that disease incident to pregnancy and lactation, characterized by inflammation and ulceration of the mouth and fauces; usually accompanied by anorexia, emaciation, and diarrhœa—and what is the best mode of treatment?

For the best dissertation on this subject the Trustees will pay the sum of one hundred dollars.

Every competitor for a premium is expected to conform to the following regulations, viz: "To forward to the Secretary of the Fiske Fund

Trustees, on or before the first day of May, 1857, free of all expense, a copy of his dissertation, with a motto written thereupon, and also accompanying a sealed packet, having the same motto inscribed upon the outside, and his name and place of residence within.

Previously to receiving the premium awarded, the author of the successful dissertation must transfer to the Trustees all his right, title and interest in and to the same, for the use, benefit and behoof of the Fiske Fund.

Letters accompanying the unsuccessful dissertations will be destroyed by the Trustees, unopened, and the dissertations may be procured by their respective authors, if application be made therefor within three months.

ISAAC RAY, M. D., Providence,
JAMES H. ELDRIDGE, M. D., East Greenwich,
CHARLES W. PARSONS, M. D., Providence,
Trustees.

S. A. ARNOLD, M. D., Providence,
Sec'y Fiske Fund Trustees.

THE MILITARY SURGEON.

"Idomeneus thus addressed Nestor: Haste to your chariot: let Machaon ride by your side, and drive to the fleet. His life is precious; *for one good physician* (and such is Machaon) is worth a whole army."—*Homer's Iliad*, Book xi.

IF war develops the latent ferocities of human nature, it also elicits all the finer feelings of humanity. Amid the din of battle, traits of character struggle into light—like gleams of sunshine bursting through the blackness of a thunder-storm—which show that the heroism of the warrior is often blended with the pitying tenderness of a woman; and that he whose strong right arm has cloven a lane through the ranks of the enemy often stoops to stanch the wounds, or moisten the parched lips of a fallen foe.

It is our purpose to show that *Medicine*—which ever scatters her benefits with a lavish hand, unthanked and unrewarded—carries her blessings into the camp and the battle-field, and that no class of men exhibit more nobly all the holier attributes of human nature than these men—our soldier-surgeons—whom the officials of a government or an army (oftentimes insolent and ignorant) are ever prone to treat with an unmerited *hauteur* and neglect.

Machaon was the surgeon of Nestor; and all our readers who are familiar with the Homeric story, know how much and how fondly the bard dwells upon his courage in the battle, and his skill in his art. We are proud to think that such men do not live only in the "Iliad," but that in every age there have been, and in the present day there are, many who are equally skilful and equally brave. Paré, Baron Larrey, Desgenettes, Bécourt, the Frères Paulet, Guthrie and Ballingall, are names which bear a historic lustre, as the ministrants of mercy and hope to the wounded; and Lévy, Pontier, Thomson, and Wilson, are men of the present day, formed of the same stern and sterling stuff.

In reading, we recently met an article written by Col. Ambert, of the 4th Regiment of French Dragoons, in which the writer bears testimony to the bravery and heroism of the army surgeons.* The picturesque eloquence of the Colonel's style tempts us to translate a few passages for the benefit of the reader:—

"We look," says he, "with pleasure at a regiment on its march. Our hearts are thrilled by the martial music, and we regard with deep interest its mounted generals who have turned gray in the service of their country, leaving home, comfort, and riches, for the hardships of the tented field. The soldiers who follow on foot, ranged in companies, are their natural successors. These crosses, these epaulettes, and that authority, will become the heritage of those men, who, with burdens on their backs, silently obey."

Would to God we, in England, could say as much! Little inducement have our soldiers to become skilful in their art, since the merest booby who has a weighty purse, or an aristocratic relation, may be placed over the heads of the bravest, best, and wisest men in the service. Must these things continue? Truly they manage things much better in France!

But to revert again to the words of Colonel Ambert:—

"Following these long files of soldiers, we observe a man, modestly clad, and walking on foot. Like them, he is on the road to battle; but he is not, like them, on the road to glorious renown and fortune. His duties will be unattended with *éclat;* his vigils will be unremembered; and even though he should prove a hero, as did Bécourt at the field of Eylau, he will probably not, like him, be personally rewarded by the Emperor. But an hour will come when this man will be the chief amongst all this multitude. It is the hour after the battle! During the fight he will brave death as fearlessly as any other one. Without sharing the excitement of the combatants, he will be a great actor in the bloody strife. He will be calm and reflective when all around him are agitated and distracted. He denies himself emotion, for his hand must not tremble; his glance must be penetrating, and his judgment must be prompt and unerring. In an atmosphere of grape-shot and smoke he is as collected as in his cabinet. The shrieks of the wounded, and the booming of the canons disturb him not; his hand is as steady as in the operating-theatre of an hospital. All ranks appeal to him for aid, and he obeys as promptly the call of the poor soldier as of the mighty general; he succors the fallen of the enemy as well as the wounded of his own army. The mangled and dying bodies of his companions and friends are brought to him, yet he must stifle in the birth every rising emotion, for the eye of the surgeon should never be veiled by a tear. Kneeling on the bloody straw of the ambulance carriage, he coolly issues his orders, and his moral courage revives the sinking hopes of the wounded; for his face wears a supreme calm which inspires them with confidence.

"In these solemn hours the military surgeon is the repository of great mysteries. The dying man intrusts him with tender messages for his far-away family; one confides to him his riches, another his profoundest secrets. After the battle, the general, the officer, and the soldier hear only the shouts of triumph and songs of joy; but the surgeon only hears the long and plaintive groaning of the whole army.

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* Col. Ambert's admirable article, originally published in the *Constitutionnel*, lies before us in the number of *L'Union Médicale* for October 31, 1855.

"Night comes; and all are asleep save him. A vigilant sentinel, he is awake amongst the wounded. Next day, though exhausted with fatigue, he sets out with the ambulance; he goes to one, and to another; here, hastily exploring a wound; there, searching for a bullet in the cavity of the human chest. He goes about giving hope to all—*sowing life*, so to speak; wrestling, in despair, with death; inventing and improvising a thousand methods; transforming planks and cords into surgical apparatus; even tearing his clothes into rags to stanch the blood of the wounded. His is the struggle between the blind force of destruction and the intelligent power of conservative science.

"Such is the man whom we have seen modestly walking at the left of the regiment.

"Honor, then, to him! His mission in armies is a thousand times sacred! Wives, mothers, and sisters—ye who, in the silence of the home-hearth tremble for those who, far away from you, are engaged in the glorious duties of war—calm your fears: Science and Charity watch over those you love."

In these enthusiastic words does the French colonel describe the sacred duties of the soldier-surgeons. On some future occasion we may sketch other traits in their character, and give other illustrations of their bravery; meanwhile, we would conclude these remarks with a noble sonnet, from the little volume of war poems recently published by Alexander Smith and Sydney Yendys, which expresses in bold verse all the heroism and self-denying devotion of which we have spoken:—

Over that breathing waste of friends and foes,
The wounded and the dying, hour by hour—
In will a thousand, yet but one in power—
He labors thro' the red and groaning day.
The fearful moorland where the myriads lay,
Moved as a moving field of mangled worms,
And as a raw brood, orphaned in the storms,
Thrust up their heads if the wind bend a spray
Above them, but when the bare branch performs
No sweet parental office sink away
With hopeless chirp of woe, so as he goes,
Around his feet in clamorous agony
They rise and fall; and all the seething plain
Bubbles a caldron vast of many-colored pain.

A. M. A. (*London Lancet*, Aug. 1856, Am. ed.)

Dumfries, *June*, 1856.

CORRECTION.—In the article on "Typhoid Fever," by Dr. W. Y. Gadbury, published in the September No. of this Journal, the following unfortunate errors occurred:—

Page 328—2 oz. Peruvian bark, should be ʒij.

Page 332—1 oz. bicarb. potass., should be ʒj.

Page 335—1 oz. Peruvian bark, should be ʒj.

Page 337—1 oz. gelatin, should be ʒij.

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